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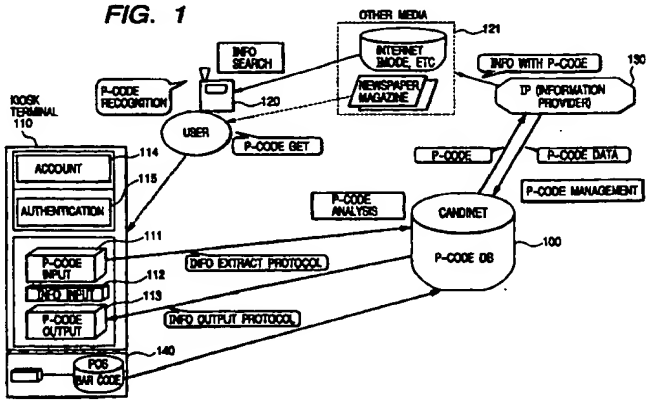
(54) Information providing system and method therefor

(57) A terminal apparatus obtains desired information from information providers and prints the information in high quality as needed. The terminal adds advertisement information to the desired information, which reduces the cost for obtaining and printing the desired information. The terminal calculates the advertisement fee by counting the number of printing of the advertisement. The terminal charges the user, up to the maximum limit desired, for the information obtained and printed according to the print amount. The terminal allows the information providers to avoid paying the advertisement fee unlimitedly.

FIG. 1



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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to an information processing method, an output control method, an apparatus and a system therefor, allowing to provide and acquire information with a level satisfactory to the information providing side and the information receiving side and also with an appropriate layout.

Related Background Art

[0002] There have conventionally been conceived services for providing various information. For information providing, there are known various forms such as 1) internet web, 2) internet pushed news delivery service, 3) fax information take-out service, 4) information requesting coupon attached to newspaper or magazine, 5) free dialing inquiry, and 6) mailing reference requesting postcard, etc. These methods are associated with respective advantages and disadvantages, and there is being desired better service capable of providing a larger number of people with information.

[0003] On the other hand, there are increasing information providing services by character information or image information, with the spreading of mobile information terminals such as mobile telephones. However, the display ability of such mobile terminals is limited in size, color, resolution etc., and the services of the above-mentioned forms may be utilized for complementing such limited ability.

[0004] Nevertheless the conventional information providing services mentioned above have respective limitations. For example the services 1) and 2) are available only to the users of personal computer or terminal, skilled in the internet environment. In addition, there is required a cumbersome procedure for finding the URL (unifor resource locator) required for making access to the desired information.

[0005] Also the service 3) is limited to the facsimile users, and is also limited by the printing ability (monochromatic, print preview etc.) of the facsimile apparatus owned by each user. Besides the output cost (telephone fee, paper fee etc.) has to be borne by the user.

[0006] The services 4) and 6) are available to unspecified plural users, but the information can be acquired several hours or several days after the service is requested. Also the information provider has to prepare physical processing system for providing the information, so that there is required an information providing cost.

[0007] In the service 5), there can only be obtained aural information through the telephone. Also if the information can be requested after aural conversation, the information itself can only be provided several hours or several days later. Besides the information provider has to prepare a physical processing system such as an automatic responding tape or a telephone operator.

[0008] In consideration of the foregoing, for realizing a better information providing service, there can be conceived a system of outputting specified information by a code system represented by symbols and numbers (hereinafter tentatively called P-code system). There is conceived demand that any person can obtain high quality output of detailed information in any place at any time.

[0009] However, the number of codes will become enormously large if all the information is to be given by the code entered by the user, and the increase in the number of digits of the code will increase the probability of erroneous input.

[0010] Also there exist various limitations even if the above-mentioned drawback is resolved. For example, the cost of information is a problem. As an example, color printout is still expensive. In the field of internet, there is conceived a service in which the information provider provides the information free of charge by inserting an advertisement from an advertisement provider, but the general user is still resistant to the acquisition of the information by printout since the printing process is costly in case of acquiring such information at a copy shop or a convenience store.

[0011] On the other hand, from the standpoint of the advertisement provider, the randomly distributed advertisement such as fold-in in the newspaper has a low hit rate (ratio of the number of actual customers per the number of delivered advertisements). Also from the standpoint of the user obtaining the printout, the randomly printed advertisement is often irrelevant to the interest of the user and merely an obstacle. There will result waste of print paper unless such limitations are resolved.

[0012] Besides, the information desired by the user has various sizes and various layouts. Consequently, the insertion of an advertisement may cause overflow of data from the limited space, thereby eventually causing the advertisement alone to be printed on an additional page. On the other hand, the data printout, if unconditionally reduced in size, may become illegible depending on the size of the original data. Thus, such service may eventually lack attractiveness to the user and the advertisement provider.

[0013] Even if the user is allowed to arbitrarily select whether or not to output the advertisement, it will be time-taking and cumbersome to confirm and determine whether or not to print the advertisements one by one. Particularly in case the user executes the printing operation on the operation panel of a terminal for example in a convenience store, the panel operation may take a long time whereby the terminal may be intolerably occupied by a user. Also the store attendant may have to respond to the inquiry of the user, for example on the operations on the panel, and these factors may hinder

efficient information providing.

[0014] Further, in case the advertisement provider has an agreement with a fixed number of advertisement for a fixed fee, expecting the output in excess of such number, the number of actually printed advertisements may become short of the anticipated number or the corresponding fee, against such expectation. Such situation is unsatisfactory to the advertisement provider.

[0015] Furthermore, in case the information and the advertisement are to be printed at the same time, it is difficult to spare a large area for the advertisement if they are to be printed on the same side of the sheet. Also the printing of plural information and advertisement on the same side requires a complex automatic layout process.

[0016] Also there is conceived a case of registering desired information in advance and outputting such information afterwards, but, in case of registering the information on a network or the like, the user wishes to execute the previewing operation as soon as possible at the selection of the file to be registered, in order to confirm the content of the selected file. However the exact preview is possible only after the registration of all the information.

[0017] Also, in a system in which the information is extracted by a code, the code is renewed and recycled as soon as the effective term of the information expires. However, the user may not notice such expiration of the effective term of the information and may try access to the information, using the same code. In such case, if the code is recycled and assigned to another information, there may result an unpleasant situation for the user and the advertisement provider, such as the output of the information of a contender. Also for the advertisement provider, the advertisement delivered regardless of the kind of information provides a low hit rate and is inefficient.

[0018] Also with the spreading of the internet and the mobile terminals, it is rendered possible to read the mails on such mobile terminal or to make access to the information on the internet from such mobile terminal, but it is still difficult to read all such information on the mobile terminal. There are encountered certain drawbacks such as interruption of a long mail or inability of access to image information in case of information involving an image. However it is difficult to always carry the personal computer for the purpose of access to such information. Consequently there still exists demand that anybody can obtained detailed information at any time in a location available to anybody.

[0019] The output has to be provided as inexpensively as possible at a level satisfactory to the user, but it is difficult to derive a variable print fee based on the number of prints, price of the printed chargeable information and fee of advertisement to be deducted therefrom.

[0020] On the other hand, the newspaper contains many information, but most of such information is often not required by the user. The individual user may wish certain information everyday, but the search from the personal computer is cumbersome and time-taking. There is already available a service providing certain information as a pack, but the user cannot arbitrarily select the combination of the information provided in such service.

[0021] Conventionally, the information providing is executed by certain internet providers, and the general users can only extract the information from the terminal therefor. Also the owner of personal computer can execute information transmission by opening a home page, but the description of such home page is not necessarily easy for all the users.

[0022] Furthermore, the advertisement of a food or a restaurant may not be adequate for example in an article reporting a poisoning from eating. Searching character trains in the information and providing an advertisement matching such information may have an adverse effect depending on the content of the information, but there is no effective means for preventing such situation.

[0023] Therefore, there has been desired a service capable of solving the above-described drawbacks singly or in combination.

SUMMARY OF THE INVENTION

[0024] In consideration of the foregoing, an object of the present invention is to provide an information processing apparatus, a method and a program therefor, adapted to read, from memory means, first value information indicating the value for output information to be outputted and second value information indicating the value of additional information to be added to the output information, and to determine the value of the output of the output information and the additional information, based on the first information of the output information and the second value information of the additional information to be added to the output information.

[0025] Another object of the present invention is to provide an output control apparatus, a method and a program therefor, adapted for entering code information for specifying output information, also entering setting information for the output of the output information, transmitting thus entered code information and setting information to an external apparatus and receiving, from the external apparatus, value information indicating the value of the output and determined in the external apparatus based on first value information indicating the value of the output information specified by the transmitted code information and second value information indicating the value of additional information to be added to the output information at the output.

[0026] Still another object of the present invention is to provide an information providing system consisting of an information processing apparatus and an output con-

trol apparatus connected through a network, a method and a program therefor, wherein the output control apparatus is adapted to enter code information for specifying output information and to transmit the code information entered by code input means, while the information processing apparatus is adapted to read first value information indicating the value of the output information to be outputted and second value information indicating the value of additional information to be added to the output information from memory means, to receive the code information and to determine the value of the output of the output information and the additional information, based on the first value information indicting the value of the output information specified by the received code information and the second value information indicating the additional information to be added to the output information at the output.

[0027] Still another object of the present invention is to provide an information processing apparatus, a method and a program therefor, adapted for entering code information corresponding to output information, acquiring the output information to which the entered code information correspond, acquiring additional information to be outputted together with the output information, and controlling an output unit so as to output the output information and the additional information based on the output face information of the additional information.

[0028] Still another object of the present invention is to provide an information processing apparatus, a method and a program therefor, adapted for receiving code information corresponding to output information from an external apparatus, acquiring the output information corresponding to the received code information, acquiring additional information to be outputted together with the acquired output information, generating output information for outputting the output information and the additional information based on the output face information of the additional information, and transmitting the generated output information to the external apparatus.

[0029] Still another object of the present invention is to provide an information processing apparatus, a method and a program therefor, adapted for acquiring plural output information corresponding to entered code information, receiving an instruction for outputting all the acquired output information, and receiving an instruction for outputting only a part of the acquired plural output information.

[0030] Still another object of the present invention is to provide an information processing apparatus, a method and a program therefor, adapted for selecting an accounting method for the information output, and, in case the selected accounting method is a cash payment, controlling an output unit so as to output a symbol indicating the amount of the value for the output of the information, together with such information.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031]

Fig. 1 is a view showing an embodiment of the information providing method, apparatus and system therefor of the present invention;

Fig. 2 is a block diagram showing the configuration of a kiosk terminal and a CanDINet control unit 100 in an embodiment of the present invention;

Fig. 3 is a cross-sectional view of a color output unit with a scanner and a two-side printing function, constituting an example of the information output unit (printer) of an information output apparatus 113 of the kiosk terminal 110;

Fig. 4 is a schematic view of an ink jet printer capable of feeding prints sheets (not shown) of plural kinds;

Fig. 5 is a flow chart showing the process sequence of the kiosk terminal 110;

Fig. 6 is a flow chart showing the control sequence of the kiosk terminal 110 in providing an information processing service;

Fig. 7 is a flow chart showing the control sequence of the kiosk terminal 110 in a print fee accounting process;

Fig. 8 is a flow chart showing the control sequence of the kiosk terminal 110 in a printing process;

Fig. 9 is a flow chart showing the control sequence of the kiosk terminal 110 in an accounting process;

Fig. 10 is a flow chart showing the control sequence of the kiosk terminal 110 in a cash accounting process;

Fig. 11 is a flow chart showing the control sequence of the kiosk terminal 110 in another service;

Fig. 12 is a flow chart showing the control sequence of the kiosk terminal 110 in providing a personal information service;

Fig. 13 is a flow chart showing the control sequence of the kiosk terminal 110 in a registration changing process;

Fig. 14 is a flow chart showing the control sequence of the kiosk terminal 110 in providing an information registration service;

Figs. 15 and 16 are flow charts showing the control sequence of the kiosk terminal 110 in a scanner process;

Fig. 17 is a flow chart showing the control sequence of the CanDINet control unit 100 in generating print data with advertisement;

Fig. 18 is a flow chart showing the control sequence of the CanDINet control unit 100 in a sheet size determining process;

Fig. 19 is a flow chart showing the control sequence of the CanDINet control unit 100 in a sheet size determining process in a mail print service;

Fig. 20 is a flow chart showing the control sequence of the CanDINet control unit 100 in a layout deter-

mining process;

Fig. 21 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement area determining process;

Fig. 22 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement search process;

Fig. 23 is a view showing an initial display image of the kiosk terminal;

Fig. 24 is a view showing a code input display image;

Fig. 25 is a view showing a password input display image;

Fig. 26 is a view showing a display image for code input from a mobile telephone;

Fig. 27 is a view showing a display image for code input by a handy scanner;

Fig. 28 is a view showing a display image for an accounting process;

Fig. 29 is a view showing list display image;

Fig. 30 is a view showing a preview display image;

Fig. 31 is a view showing an "advertisement setting" display image;

Fig. 32 is a view showing a mailbox display image;

Fig. 33 is a view showing a display image for selecting the mail printout method;

Fig. 34 is a view showing a registration frame display image;

Fig. 35 is a view showing a change registering display image;

Fig. 36 is a view showing a display image showing the content of the registered frame corresponding to the frame number;

Fig. 37 is a view showing a display image for selecting the frame sheet size or sheet direction;

Fig. 38 is a view showing a display image for entering telephone number;

Fig. 39 is a view showing a display image indicating the information registering method;

Fig. 40 is a view showing a display image for instructing scanner input;

Fig. 41 is a view showing an example of the preview image;

Fig. 42 is a view showing a password setting display image;

Fig. 43 is a view showing an effective term setting display image;

Fig. 44 is a view showing a display image indicating P-code, password, data amount, effective term and registration fee of deposited image data;

Fig. 45 is a view showing a display image indicating information necessary for determining the sheet size;

Fig. 46 is a view showing an example of IP information registration table;

Fig. 47 is a view showing an advertisement information table;

Fig. 48, composed of Figs. 48A and 48B, is a view showing an example of user information table;

Fig. 49 is a view showing an example of P-code table for personal P-code service;

Fig. 50 is a view showing an example of personal information table;

Fig. 51 is a view showing an example of owner information table;

Fig. 52 is a view showing a terminal information table;

Fig. 53 is a basic flow chart showing the control sequence of the CanDINet control unit 100 in generating print data;

Fig. 54 is a view showing an example of layout of advertisement data;

Fig. 55 is a view showing an example of layout of the advertisement data after layout change;

Fig. 56 is a view showing an example of printout of the generated print data;

Fig. 57 is a view showing an example of keyword list generated from the IP information registration table;

Fig. 58 is a view showing a registration display image for entering name, contact address etc. by the user;

Fig. 59 is a view showing a registration display image for entering a password required for changing the content of the user registration;

Fig. 60 is a view showing a registration display image for designating the service to be assigned to the issued P-code;

Fig. 61 is a view showing a registration display image for entering personal information of the user;

Fig. 62 is a view showing a registration display image for registering the information, interesting to the user, in the CanDINet control unit 100;

Fig. 63 is a view showing a registration display image for designating the priority condition and the layout in the printout;

Fig. 64 is a view showing a registration display image for entering name, contract address etc. by the advertisement provider;

Fig. 65 is a view showing a registration display image for designating image data and text data for advertisement insertion;

Fig. 66 is a view showing a registration display image for designating the starting date and effective term of the advertisement insertion by the advertisement provider;

Fig. 67 is a view showing a registration display image for limiting the area where the advertisement data are printed;

Fig. 68 is a view showing a registration display image for the advertisement provider to select a printing size of the advertisement data among the predetermined sizes and to select a condition for changing the advertisement size;

Fig. 69 is a view showing a registration display image for designating a full-page advertisement, a top-printed advertisement or a back-side advertise-

ment;

Fig. 70 is a view showing a registration display image for designating the limitation on the number of printing of the advertisement insertion and the limitation on the advertisement fee;

Fig. 71 is a view showing a registration display image for entering name, contact address etc. of the information provider;

Fig. 72 is a view showing a registration display image for designating image data or text data for information providing;

Fig. 73 is a view showing a preview display image indicating how the image data are printed from the kiosk terminal;

Fig. 74 is a view showing a registration display image for designating the starting date and effective term of the information providing by the information provider;

Fig. 75 is a view showing a registration display image for the information provider to designate the character size and image size in the information data printout;

Fig. 76 is a view showing a registration display image for designating whether the insertion of advertisement is permitted on not on the same page at the printout of the information data and whether a password is required for the printout of the information data;

Fig. 77 is a view showing a registration display image for fee setting;

Fig. 78 is a view showing a registration display image for the information provider to register the information to be provided with the information data;

Fig. 79 is a view showing different kinds of layout;

Fig. 80 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement area securing process;

Figs. 81 and 82 are flow charts showing the control sequence of the CanDINet control unit 100 in displaying a registration frame image;

Fig. 83 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement area determining process on the front surface;

Fig. 84 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement area determining process on the back surface; and

Fig. 85 is a flow chart showing the control sequence of the CanDINet control unit 100 in an advertisement area determining process on a separate sheet.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[First embodiment]

[0032] Fig. 1 is a view showing an embodiment of the information providing method, apparatus and system of the present invention, wherein a database/management unit 100 manages the information to be provided and the issued numbers of P-codes and controls the output layout. The unit is hereinafter called CanDINet control unit.

[0033] An apparatus 110, hereinafter called "kiosk terminal", is placed in a location accessible to unspecified plural users such as sales stalls in railroad stations or convenience stores, for the purpose of information input/output and P-code input.

[0034] The kiosk terminal 110 is composed of a user interface or a code input device (P-code input device 111) for entering P-code, an information input device 112 for registering/inputting information from the terminal, a P-code information output device 113 capable of high-quality two-side printout, and a device for fee settling and personal verification such as a fee setting device 114 for receiving the fee inserted by the user and a personal verifying device 115.

[0035] A mobile terminal device 120 can be used by the user for obtaining the P-code required for information output. The user with no personal computer can use this terminal for finding the desired information, and can obtain the high-quality output by entering the P-code corresponding to the found information into the kiosk terminal 110.

[0036] An information provider (IP) 130 generates data for providing various information. Such providers can be divided into those sealing with the advertisements found in the ordinary home pages of the internet, and those providing the added value information such as hose race forecast. Such provider registers, in the CanDINet control unit 100, the data corresponding to the information to be provided whereby a P-code is assigned to the provided information. The user searches the information on the information terminal and enters the P-code, corresponding to the information, into the kiosk terminal 100 whereby the information can be outputted (printed).

[0037] In this process, an advertisement is printed in a space area or on the back surface of the sheet, together with the output information, whereby the print fee to be charged to the user can be alleviated.

[0038] An information medium 121 such as internet, a newspaper or a magazine also provides the P-code in addition to the information terminal 120. The user, acquiring the P-code therefrom, can enter such P-code into the kiosk terminal 110 at the convenience store or the like thereby obtaining (printing) the desired information in a simple manner.

[0039] A device 115 executes personal verification

whether the user is allowed to obtain the output of the specified information by the input of the P-code. A device 114 executes charge setting process for the information output by the user. This device may be linked with a POS system 114 in the convenience store or the like.

[0040] The above-described system can provide the information providing service of, for example, following four kinds:

1) Information service: This is a basic service of the present system, wherein the user can print the information provided by the information provider 130, by acquiring the P-code from the terminal 120 or another information medium 121 and entering such P-code into the kiosk terminal 110 as explained in the foregoing. The fee for information output is variable according to various conditions such as presence/absence of advertisement, back-side printing, color/monochromatic printing etc.;

2) Mail print service: In case the user wishes to print the content of an electronic mail sent to the mobile terminal or the user without the mobile terminal wishes to read an electronic mail outside his office, this service allows the user to print the content (mail information) of the electronic mail by entering the P-code. Also in this service, the fee for information output is variable according to various conditions such as presence/absence of advertisement, back-side printing, color/monochromatic printing etc.;

3) Personal information service: This service allows the user not only to acquire the individual information by the P-code associated thereto but also to acquire, by a P-code specific to the user, an integrated information selected according to the desire of the user. This service includes, for example, "my sports newspaper" consisting of news articles of a specified baseball team, outputted every morning at a convenience store. In order to receive such service, the user has to obtain a personal membership and the issuance of a P-code specific to the user (called personal P-code). In entering such personal P-code, it is necessary to enter a password or the like into the personal verification device 115. The fee for information output is variable according to various conditions such as presence/absence of advertisement, back-side printing, color/monochromatic printing etc.; and

4) Data delivery service: This service allows the user to temporarily deposit information (data), just like depositing a car in a coin-operated car park, and to extract the data afterwards. The information can be deposited either by entering the information through the information input device 112 (for example a scanner) of the kiosk terminal 110 (case A) or by transferring the desired information to the CanDINet control unit 100 through the internet (case B).

[0041] At the input (case A)or transfer (case B) of the information, a personal P-code is issued, and the information can be outputted at any desired location by entering such P-code in the kiosk terminal 110. The fee for information output is variable according to various conditions such as presence/absence of advertisement, back-side printing, color/monochromatic printing etc.

[0042] Fig. 2 is a block diagram showing the control configuration of the kiosk terminal 110 and the CanDINet control unit 100 in the present embodiment. They may be composed of a single equipment or a system consisting of plural equipment, as long as the functions of the present invention can be attained. More specifically, the kiosk terminal 110 and the CanDINet control unit 100 may be composed of a single equipment, or of a system connected through a network such as LAN or WAN constructed by optical cables or public communication lines. Further, in such system, the CanDINet control unit 100 may naturally be present in plural units, for example in respective areas or in respective countries. Such configuration is adopted in the present embodiment. In Fig. 2, the information provider 130 is connected to the kiosk terminal 110 and the CanDINet control unit 100 for example through the public lines.

(CanDiNet control unit 100)

[0043] In Fig. 2, a CPU 201 processes a document containing graphics, image, characters, table etc. according to a program (corresponding to the flow charts to be explained later) stored in a program ROM in a ROM 203 or in an external memory 211 of a large capacity, and also manages a database stored in the external memory 211. The CanDINet control unit 100 executes compression of the information and the advertisement information, generated by the document processing and the layout process, into and conversion of such information into data of a script format, and transfers the data to the kiosk terminal 110 according to an information output protocol.

[0044] Also if the information from the external information provider 130 is compressed data or data of script format, the CanDINet control unit 100 executes thawing of such compressed data or conversion of the script format data into an image, for data editing.

[0045] The CPU 201 collectively controls devices connected to a system bus 204. In the program ROM of the ROM 203 or the external memory 211, there is stored an operating system (OS) which is the control program for the CPU 201. Also a font ROM of the ROM 203 or the external memory 211 stores font data to be used in the document processing mentioned above. A data ROM of the ROM 203 or the external memory 211 stores various data to be used in the document processing mentioned above. A RAM 202 functions as a main memory and a work area of the CPU 201.

[0046] A keyboard controller (KBC) 205 controls the inputs, from a keyboard 209 and an unrepresented

pointing device. A CRT controller (CRTC) 206 controls the display on a CRT display 210. These devices are to be used by the manager when required and are not directly related to the present invention. A disk controller (DKC) 207 controls access to the external memory 211 such as a hard disk (HD) or a floppy disk (FD) storing a boot program, various application programs, font data, user files, editing files, a printer control command generation program (hereinafter called printer driver) etc. An interface controller 208 is connected to the kiosk terminal 110 through the network and executes a communication control process on the network.

[0047] The CPU 201 realizes WYSIWYG (what you see is what you get) on the CRT 201 by executing an outline font development (rasterization) onto a display information RAM in the RAM 202. Also the CPU 201 opens various registered windows and executes various data processings, based on commands instructed by the user for example with an unrepresented mouse cursor on the CRT 210. In response to an instruction for printing by the user, there is opened a window for setting for the printing operation. On this window, the user can set the printing process for the printer driver, such as printer setting or printing mode selection.

[0048] An information output device 250 of the kiosk terminal 110, a printer CPU 212 outputs an image signal, constituting the output information, to a printing unit (printing engine) 217 based on a control program stored in a program ROM of a ROM 213 or in an external memory 214. The program ROM of the ROM 213 also stores the control programs of the CPU 212, corresponding to the flow charts to be explained later. A font ROM in the ROM 213 stores font data to be used in the generation of the above-mentioned output information.

[0049] An information input unit 218 is composed for example of an image scanner (scanner unit) and an interface, and is connected with the CanDINet control unit 100 through a network or a public line. The scanner unit reads an original and executes a digital signal process, thereby generating the image information of the original. This is utilized in the aforementioned in the data delivery service, in temporarily depositing the information from the terminal in the store.

[0050] The CPU 212 is rendered capable of communication with the CanDINet control unit 100 through the interface, thereby transmitting the information of the printer to the CanDINet control unit 100. A RAM 219 functions as a main memory or a work area of the CPU 212, and can be expanded in capacity by an optional RAM to be connected to an unrepresented expansion port. The RAM 219 is utilized as an output information developing area, an environment data storage area, an NVRAM etc. The aforementioned external memory 214 such as a hard disk or an IC card is access controlled by a memory controller (MC) 220. The external memory 214 is connected as an option and is used for storing font data, emulation data, form data etc.

[0051] An operation unit 251 is provided with a display unit for displaying various images to be explained later, a touch panel provided on the display unit and/or separately positioned operation switches (buttons).

[0052] The aforementioned external memory 214 is not limited to one unit but may be provided in plural units, storing optional fonts and a program for interpreting the printer control language of a different language system. Further, the external memory 214 may be provided with an unrepresented NVRAM for storing the printer mode setting information entered from the operation unit 251.

(Configuration of printer)

[0053] Fig. 3 is a cross-sectional view of a color output unit with a scanner and with two-side printing function, constituting an example of the printer of the information output apparatus 250 of the kiosk terminal 110. Though not illustrated, there is naturally attached the information input device 218 shown in Figs. 1 and 2.

[0054] In this printer, a laser beam modulated with the image data of each color, obtained from the print data entered from the host computer, scans a photosensitive drum 55 through a polygon mirror 31 thereby forming an electrostatic latent image. The latent image is developed with toner to obtain a visible image, and the toner images of all the colors are transferred in superposed manner onto an intermediate transfer member 49 to obtain a visible color image. Such visible color image is further transferred onto a transfer material 42, and is fixed thereon. An image forming unit executing the above-described process is composed of a drum unit including the photosensitive drum 55, a sheet feeding unit including a primary charging unit with a contact charging roller 57, a cleaning unit, a developing unit, the intermediate transfer member 49, a sheet cassette 41 and rollers 43, 44, 45, 47, and a transfer/fixation unit 25 including a transfer roller 50.

[0055] The drum unit 53 is integrally composed of the photosensitive drum (photosensitive member) 55 and a cleaner container 43 having a cleaning mechanism, serving also as the holder for the photosensitive drum 55. The drum unit 53 is detachably supported in the main body of the printer, and can be easily replaced, depending on the service life of the photosensitive drum 55. The photosensitive drum 55 is composed of an aluminum cylinder, coated with an organic photoconductive layer on the external periphery thereof, and is rotatably supported in the cleaner container 54. The photosensitive drum 55 is rotated by an unrepresented driving motor, counterclockwise according to the progress of the image forming operation. The surface of the photosensitive drum 55 is selectively exposed to the laser beam, supplied from a scanner unit 30, thereby forming the electrostatic latent image. In the scanner unit 30, the modulated laser beam is reflected by the polygon mirror rotated in synchronization with the horizontal sync signal of the image signal, thereby irradiat-

ing the photosensitive drum through a lens 32 and a mirror 33.

[0056] For developing the electrostatic latent image into a visible image, the developing unit is provided with three color developing units 20Y, 20M, 20C respectively for yellow, magenta and cyan development, and a black developing unit 21B for black color development. The color developing units 20Y, 20M, 20C and the black developing unit 20B are respectively provided with sleeves 20YS, 20MS, 20CS, 21BS and coating blades 20YB, 20MB, 20CB, 21BB in pressure contact with the external periphery of these sleeves. Also the three color developing units 20Y, 20M, 20C are further provided with coating rollers 20YR, 20MR, 20CR.

[0057] The black developing unit 21B is rendered detachably from the main body of the printer, and the color developing units 20Y, 20M, 20C are detachably mounted on a developing rotary 23 rotating about a rotary shaft 22.

[0058] The sleeve 21BS of the black developing unit 21B is positioned with a small gap of about 300 μm to the photosensitive drum 55. The black developing unit 21B conveys the toner by an incorporating conveying member, and provides the toner with a triboelectric charge by the coating blade 21BB so as to coat the external periphery of the clockwise rotating sleeve 21BS with the toner. A developing bias voltage is applied to the sleeve 21BS to effect development on the photosensitive drum 55 according to the electrostatic latent image, thereby forming a visible image with the black toner on the photosensitive drum 55.

[0059] The three color developing units 20Y, 20M, 20C rotate along with the rotation of the developing rotary 23 whereby each of the sleeves 20YS, 20MS, 20CS is opposed to the photosensitive drum 55 with a small gap of about 300 μm thereto.

[0060] Thus predetermined one of the color developing units 20Y, 20M, 20C stops at a developing position opposed to the photosensitive drum 55 to form a visible image thereon.

[0061] At the formation of a color image, the developing rotary 23 rotates at every turn of the intermediate transfer member 49 whereby the developing process is executed in succession by the yellow, magenta and cyan developing units 20Y, 20M, 20C and the black developing unit 21B to form visible images of yellow, magenta, cyan and black colors in succession during four turns of the intermediate transfer member 49, whereby by a full-color visible image is formed thereon.

[0062] The intermediate transfer member 49 is so constructed as to rotate along the rotation of the photosensitive drum 55 in contact therewith and rotates clockwise at the color image formation, thereby receiving multiple of the visible image four times from the photosensitive drum 55. Also at the image formation, a transfer roller 50 to be explained later comes into contact with the intermediate transfer member 49 for supporting the transfer material 42 therebetween, whereby the visible color image on the intermediate transfer member 49 is collectively transferred simultaneously thereonto. Along the external periphery of the intermediate transfer member 49, there are provided a top sensor 49a for detecting the rotational position thereof, an RS sensor 49b and a density sensor 49c for detecting the density of the toner image formed on the intermediate transfer member.

[0063] A transfer roller 50 is provided with a transfer charger supported so as to be capable of contacting to and separating from the photosensitive drum 55, and is formed by winding a metal shaft with a foamed elastic member of an intermediate electric resistance.

[0064] The transfer roller 50 is separated downwards as indicated by solid lines in Fig. 9 in order not to disturb the visible color image during the multiple transfers thereof onto the intermediate transfer member 49. After the formation of the visible color image on the intermediate transfer member 49, the transfer roller 50 is shifted upwards as indicated by broken lines by a cam member (not shown) at the timing of transfer of the visible color image onto the transfer material 42. Thus the transfer roller 50 is pressed with a predetermined pressure to the intermediate transfer member 49 across the transfer material 42 and is given a bias voltage, whereby the visible color image on the intermediate transfer member 49 is transferred onto the transfer material 42.

[0065] The fixing unit 25 is to fix the transferred visible color image and is provided with a fixing roller 26 for heating the transfer material 42 and a pressure roller 27 for pressing the transfer material 42 to the fixing roller 26. The fixing roller 26 and the pressure roller 27 are hollow in structure and are respectively provided with heaters 28, 29 therein.

[0066] The transfer material 42 bearing the visible color image is conveyed by the fixing roller 26 and the pressure roller 27 and is subjected to the application of heat and pressure whereby the toner is fixed to the surface.

[0067] After the fixation of the visible image, the transfer material 42 is conveyed by discharge rollers 34, 35, 36 to a discharge unit 37 whereupon the image forming operation is terminated.

[0068] The cleaning means is to remove the toner remaining on the photosensitive drum 55 and the intermediate transfer member 49. The used toner remaining after the transfer of the visible image from the photosensitive drum 55 onto the intermediate transfer member 49 and that remaining after the transfer of the 4-color visible images from the intermediate transfer member 49 to the transfer material 42 are stored in a cleaner container 54.

[0069] The transfer material 42 for printing (recording sheet) is taken out from a sheet feeding tray 41 by a sheet feeding roller 43, then conveyed by pinching between the intermediate transfer member 49 and the transfer roller 50 for image recording, and is passed by the fixing unit 25 for fixing the toner image. In case of

one-side printing, a guide 35 forms a conveying path for guiding the recording sheet to the upper discharge unit, but, in case of two-side printing, the guide 35 forms a conveying path for guiding the recording sheet to a two-side unit positioned below.

[0070] The recording sheet conveyed into the two-side unit is forwarded under the tray 41 (path indicated by chain lines) by a conveying roller 40, then conveyed in the opposite direction and fed to a two-side tray 39. On the tray 39, the sheet is inverted from the state on the sheet feeding tray 41, and the leading and trailing ends of the sheet are inverted with respect to the conveying direction. In this state the sheet is subjected again to the transfer and fixation of the toner image whereby two-side printing can be realized.

[0071] The printer is not limited to the electrophotographic printer of the above-described type but can be an electrophotographic printer of 4-drum type, a thermal transfer printer, so-called bubble jet printer emitting liquid droplets by film boiling based on thermal energy, or an ink jet printer of piezo type.

[0072] Fig. 4 is a schematic view of an ink jet printer capable of feeding unrepresented recording sheets of plural types. In Fig. 4, a carriage 450 engaging by an unrepresented pin thereof with a spiral groove 404 of a lead screw 405, which is rotated in forward or reverse direction by the rotation of a driving motor 413 through transmission gears 411, 409, executes reciprocating motion in directions a and b. The carriage 450 supports an ink jet cartridge 451.

[0073] A paper pressing plate 402 presses the recording sheet to a platen 400 along the moving direction of the carriage. Photocouplers 407, 408 constitute home position detecting means for detecting the presence of a lever 406 of the carriage in the corresponding area, thereby switching the rotating direction of the motor 413.

[0074] A member 416 supports a cap member 422 for capping the front face of the recording head. Suction means 415 for sucking the interior of the cap executes suction recovery of the recording head through an aperture 423 in the cap.

[0075] A supporting plate 418 supports a cleaning blade 417 and a member 419 for moving the cleaning blade forward and backward. The blade is not limited to the illustrated form but may naturally assume any known form. A lever 421 for initiating the suction recovery operation is moved by the movement of a cam 420 engaging with the carriage, whereupon the driving force from the driving motor is controlled by known transmission means such as a clutch.

[0076] The capping, cleaning and suction recovery are executed at respective positions of the carriage by the function of the lead screw 405 when the carriage reaches an area of the side of the home position, but any configuration may be applied to the present embodiment as long as the desired operation is executed at the known timing.

[0077] In the present invention, plural equipment (for example a host computer, an interface equipment, a reader, a printer etc.) may be integrally constructed.

[0078] The objects of the present invention can naturally be attained also in a case where the program codes of a software realizing the functions of the embodiments or a memory medium storing such program is supplied to a system or an apparatus and such program codes are read and executed by a computer (CPU or MPU) of the above-mentioned system or apparatus.

[0079] In such case the program codes themselves of the software realize the novel functions of the aforementioned embodiment, and the memory medium storing the program codes and the program itself constitute the present invention. The memory medium storing such program codes can be, for example, a floppy disk, a hard disk, an optical disk, a magnetooptical disk, a CD-ROM, a CR-R, a DVD, a magnetic tape, a non-volatile memory card or a ROM.

[0080] The present invention also includes not only a case where the functions of the aforementioned embodiment are realized by the execution of the program codes read by the computer but also a case where an operating system or the like functioning on the computer executes all or a part of the actual processes under the control of such program codes thereby realizing the functions of the aforementioned embodiment. The present invention further includes a case wherein the program codes read from the memory medium are once stored in a function expansion board inserted into the computer or a function expansion unit connected to the computer, and a CPU provided in the function expansion board or the function expansion unit executes all the process or a part thereof under the control of such program codes, thereby realizing the functions of the aforementioned embodiment.

(P-code of information provider)

[0081] In the present embodiment, in case the information provider 130 wishes to provide information, the provider applies for registration to the CanDINet control unit 100 and issuance of a P-code. In this process, the information provider 130 makes access to the CanDINet control unit 100 and enters information necessary for registration in registration display images shown in Figs. 71 to 78.

[0082] At first, in a registration display image shown in Fig. 71, there are entered name and contact address of the information provider 130.

[0083] In a registration display image shown in Fig. 72, the information provider 130 designates the image data or text data (hereinafter collectively called information data) for providing information, whereupon there is displayed a preview image (Fig. 73) showing how the image data are printed from the kiosk terminal 110. If the preview image is acceptable, the information pro-

vider 130 depresses a "Transfer to server" button, whereby the information data are transferred to the CanDINet control unit 100.

[0084] In a registration display image shown in Fig. 74, the information provider 130 designates the starting date and effective term of information providing. When the effective term after the starting date expires, the information data are no longer printed out from the kiosk terminal 110. Otherwise, even if the information data are requested to the CanDINet control unit 100 from the kiosk terminal 110, the information data are no longer transferred to the kiosk terminal 110. In the registration image shown in Fig. 75, the information provider 130 designates the character size and image size when the information data are printed. The example shown in Fig. 75 indicates that the character size is variable from 8 to 14 pt. and the image can be reduced or enlarged within a range from 50 to 200% in the printing of the information data.

[0085] In the registration display image shown in Fig. 76, the information provider designates whether or not to permit printing of the advertisement on the same paper at the printing of the information data, and whether a password is required for printing the information data. Also in case of permitting advertisement printing, there can be designated permission of printing on the back surface.

[0086] Also in case the information providing is to be charged, the fee is set in the registration display image shown in Fig. 77. Finally, in the registration display image shown in Fig. 78, the information provider 130 registers the mode of information providing in the CanDINet control unit 100. There are selected a genre and a sub genre, depending on the content of the information data to be provided. Also there is entered a keyword for determining the kind of the advertisement, in case the advertisement is inserted in the printout of the information data.

[0087] When the information provider 130 completes the registering operation on the registration display images shown in Figs. 71 to 78, the CanDINet control unit 100 issues a P-code for the above-mentioned information data. Also, based on the information entered in the registration display images, an IP information registration table regarding such P-code is prepared and stored in a P-code DB (P-code database).

[0088] Fig. 46 shows an example of the IP information registration table 4601, which contains the P-code at the left end column, and stores the basic property of the information data corresponding to the P-code. The owner ID of the basic property is linked with an owner information table for the information providing having this P-code. Fig. 51 shows an example of the owner information table, which stores the information entered by the information provider 130 on the registration display image shown in Fig. 71.

(P-code of user)

[0089] In the present embodiment, when the user applies for registration to the CanDINet control unit 100, it can issue a personal IP-code to such user (hereinafter called user P-code). The user P-code is used in the mail print service, information registration service (data deposit service) and personal information service, which will be explained later in more details.

[0090] The user makes access to the CanDINet control unit 100 from the kiosk terminal 110 or a personal computer at home, and enters information necessary for registration on the registration display images shown in Figs. 58 to 63.

[0091] At first, in the registration display image shown in Fig. 58, the user enters name and contact address. In the registration display image shown in Fig. 59, there is entered a password necessary for changing the content of the user registration. The password is set at a new registration, and the password entered at the new registration is entered if the content of registration is to be changed thereafter.

[0092] In the registration display image shown in Fig. 60, the user designates the service for which the P-code to be issued is to be used. In the registration display images shown in Fig. 61 and 62, the personal information of the user is entered. Particularly in the image shown in Fig. 62, the user can register the interesting information in the CanDINet control unit 100.

[0093] Finally, on the registration display image shown in Fig. 63, the user designates whether the printout of the information by the kiosk terminal 110 is executed preferentially with legibility or page or with a default layout. In this display image there can also be designated the size and direction of the sheet in the information printout. In this display image, there can also be designated whether the two-side printing is executed preferentially if the two-side printing is required for printing the information or the advertisement.

[0094] When the user completes the registering operation on the registration display images shown in Figs. 58 to 63, the CanDINet control unit 100 issues a P-code to the user. Also a user information table regarding such P-code is prepared and stored in the P-code DB (P-code database).

[0095] Figs. 48A and 48B show an example of the user information table 4801, which contains the P-code at the left end column, and also stores the user property of the user having the P-code, a personal information table on such user, and information required when the P-code is used for the mail service, information registration service (delivery service) and personal information service. The personal information table is linked with the personal information table on the user having the P-code. Fig. 50 shows an example of the personal information table 5001, which stores the information entered by the user on the registration display image shown in Figs. 58 to 63.

(Process of kiosk terminal)

[0096] In the following there will be explained the process operations of the kiosk terminal 110. Fig. 5 is a main flow chart showing the process sequence of the kiosk terminal 110 after the user starts using the kiosk terminal 110. At first, when the user stands in front of the kiosk terminal 110, the panel of the operation unit 251 displays an initial display image shown in Fig. 23 (step S501), including three buttons 2301, 2302, 2303 for selecting the input method for P-code and a button to be used when the user wishes to utilize the information registration service. When the user depresses any of these buttons, the kiosk terminal 110 discriminates the depressed button (step S501). If the button 2302 for "input from mobile telephone" is depressed (step S501 - telephone), there is displayed an image shown in Fig. 26. In response the user enters the P-code from an information terminal 120 such as a mobile telephone and depresses an "OK" button, whereupon the sequence proceeds to a step S508.

[0097] If the button 2303 for "input from handy scanner" is depressed (step S502 - scanner), there is displayed an image shown in Fig. 27 (step S505).

[0098] In response the user uses the scanner to read a code on a handy scanner code table, provided at a side of the kiosk terminal 110, and when the kiosk terminal 110 discriminates that the user has then depressed an "OK" button (step S506 - OK), the sequence shifts to a step S512. As the handy scanner code table only contains the P-code for the information print service, there is immediately initiated the process of the information print service. If there is discriminated that the user has depressed a "cancel" button (step S506 - cancel), the sequence returns to the step S501 for displaying the initial image.

[0099] If a "Press here for information registration service" button is depressed on the initial image (step S501 - data deposit), the sequence shifts to the process of the information registration service (also called data deposit service).

[0100] If an "Input by touch panel" button is depressed on the initial image (step S502 - touch panel, there is displayed a code input image shown in Fig. 24. The display contains numeral keys for entering the code and "OK", "cancel", "correction" and "code input" buttons, and the depressed button is discriminated (step S502). If a numeral key is depressed, a character or a number corresponding to the depressed key is displayed. If the "correction" key is depressed, the displayed code is canceled.

[0101] If the "cancel" button is depressed (step S508 - cancel), the sequence returns to the step S501 for displaying the initial image. If the "code input" button is depressed (step S508 - code input), the currently entered code is stored in the RAM 219, and the code input image is displayed anew for enabling the user to enter a next code (step S507).

[0102] If the "OK" button is depressed (step S508 - OK), the code entered by the user and stored in the RAM 219 is transferred to the CanDINet control unit 100 (step S509). The CanDINet control unit 100 discriminates the service type from the received code and the kiosk terminal receives the result of discrimination service type) (step S510).

[0103] Then there is discriminated whether the received service type is the information print service (also called information service) (step S511). If not, there is executed another service process (step S513).

[0104] If the received service type is the information print service (step S511 - Yes), there is executed the process of the information service (step S512), which will be explained later in more details.

[0105] When the process of each service is terminated at the step S512 or S513, there is displayed an account setting image shown in Fig. 28 (step S514) and a process for charge settling is executed (step S515). If the service charge becomes free in the course of the service process, the steps S514 and S515 are skipped and the main flow is terminated from ③ .

[0106] In the following there will be explained the function of the kiosk terminal 110 in each service process and charge settling process.

(Information service process)

[0107] Fig. 6 is a flow chart showing the function of the kiosk terminal 110 in providing the information service. At first it receives, with respect tot he P-code transmitted in the step S509 in Fig. 5, the property data and preview image data of the information corresponding to the P-code, from the CanDINet control unit. The property data include the title (file name) of the information, charge, number of sheets in printing etc.

[0108] Then, based on the acquired data, there is displayed a list image shown in Fig. 29. The list image in Fig. 29 includes an information list 2908 corresponding to the P-code entered by the user, print setting buttons 2901, 2902 corresponding to the list items, an "advertisement setting" button 2903, a "print preview display" button 2904, a "print" button 2905, a "return" button 2906 and a "cancel" button 2907.

[0109] The kiosk terminal 110 discriminates the button depressed by the user (step S602). If the print setting button is depressed (step S603 - "color", "monochrome", "none"), there is memorized the depressed button among "color", "monochrome" and "none", and the display is changed accordingly. The "color", "monochrome" and "none" buttons respectively indicate whether the information corresponding to the P-code is printed in color, in monochrome or not printed. It is assumed that "color" is selected for all the P-codes at the step S29.

[0110] If the "cancel" button is depressed (step S603 - cancel), an instruction for cancellation is transmitted to the CanDINet control unit and the sequence

returns to the step S501 in Fig. 5.

[0111] If the "print preview display" button is depressed (step S603 - preview), a preview image shown in Fig. 30 is displayed, based on the preview image data received in the step S601. The preview image includes a preview image 3001 schematically showing the information to be printed, a "next page" button for displaying the preview image of the next page, a "previous page" button for displaying the preview image of the previous page, and a "return to main image" button for returning to the above-mentioned list image. The kiosk terminal 110 discriminates the button depressed in the preview image (step S610).

[0112] If the "next page" or "previous page" button is depressed (step S610 - No), there is displayed the preview image of the next or preceding page. If the "return to main image" button is depressed (step S610 - Yes), there is displayed the list image shown in Fig. 29 and the sequence returns to the step S603.

[0113] In the foregoing description, the step S605 displays the preview image received in the step S601, but there may be displayed a preview image in consideration of the output format of the advertisement selected by the user in the "advertisement setting" to be explained in the following. In such case, the output format of the advertisement, currently selected by the user, is transferred to the CanDINet control unit, thereby causing the CanDINet control unit to prepare the preview image data with the advertisement. Then such image data are received to display the preview image with advertisement.

[0114] If the "advertisement setting" button is depressed in the list image shown in Fig. 29 (step S603 - advertisement setting), there is displayed an "advertisement setting" image as shown in Fig. 31 (step S604), and there is executed a process for print charge settling (step S609).

(Print charge process)

[0115] In the print service, the user pays a print charge, including the service charge, at the printing of the information provided by the information provider 130. However, if an advertisement is inserted in the print, a part of the print charge is borne by the advertisement, so that the print charge is reduced. The amount of reduction of the print charge varies according to the mode of insertion of the advertisement and the amount thereof.

[0116] Consequently, in the "advertisement print" image shown in Fig. 31, the user can select the output format of the advertisement in consideration of the reduction of the print charge. The "advertisement print" image includes "yes", "no" buttons 3101 for selecting whether or not to print the advertisement in an empty space of the information, "yes", "no" buttons 3102 for selecting whether or not to print the advertisement on the back surface, "yes", "no" buttons 3103 for selecting whether or not to print the advertisement on another page, an "OK" button and a "cancel" button.

[0117] Fig. 7 is a flow chart showing the function of the kiosk terminal 110 in the print charge process. At first there is discriminated the button depressed on the "advertisement print" image (step S701). If "yes" or "no" button is depressed (step S701 - yes, no), there is memorized the selected output format, and the display is so changed that the depressed one of "yes" and "no" buttons is made clear to the user.

[0118] If the "cancel" button is depressed (step S701 - cancel), the process is terminated without the advertisement setting. If the "OK" button is depressed, the output format of the advertisement is transmitted to the CanDINet control unit (step S703) and there is received a print charge in consideration of the output format of the advertisement.

[0119] In case the advertisement is not inserted, the CanDINet control unit 100 calculates the print charge, based on the charge entered by the information provider on the registration display image shown in Fig. 77 and stored in the information price column of the IP information registration table shown in Fig. 46. In this operation, the print charge is calculated in consideration of the fee for monochromatic or color printing and the fee for the print sheet, according to the print setting shown in Fig. 29.

[0120] In case the advertisement is inserted, the CanDINet control unit 100, after the above-mentioned calculation of the print charge, subtracts the charge discount for advertisement insertion from thus calculated print charge, thereby obtaining the print charge anew. The charge discount varies according to the amount of advertisement insertion and whether the advertisement is printed on the front or back surface.

[0121] However, if the charge after deduction of the discount charge from the normal print charge becomes negative, the print charge is set at zero or at a predetermined value.

[0122] Upon completion of the print charge process, the list image is displayed with a suitably changed print charge in the column 2903, and the sequence returns to a step S603 in Fig. 6.

(Printing process)

[0123] If the "print" button is depressed in the list image shown in Fig. 29 (step S603 - printing, in Fig. 6), there is discriminated whether the printing is currently charged or free. The print charge is calculated from the charge for the information corresponding to the P-code received in the step S601, the print charge in consideration of the advertisement received in the step S704.

[0124] If the printing is to be charged, the information service process is terminated and the sequence shifts to a step S513 in Fig. 5. If the printing is free of charge, the printing process is executed immediately (step S612) and the main flow is terminated from ③ in

Fig. 5.

[0125] Fig. 8 is a flow chart showing the function of the kiosk terminal 110 in the printing process. At first a request for the print data is given to the CanDINet control unit (step S801). In this operation, the kiosk terminal 110 requests the print data for the P-code selected for printing on the list image in Fig. 29. It also informs the CanDINet control unit whether the printing is in color or in monochrome, thereby receiving the print data for color or monochromatic printing from the CanDINet control unit. Also the output format of the advertisement, selected in the print charge process, is informed to the CanDINet control unit.

[0126] Then the print data are received from the CanDINet control unit (step S802), and transferred to the printer (print unit 17) for starting the printing operation.

[0127] Then there is discriminated whether the printing operation has been completed (step S804), and, if not (step S804 - No), there is displayed an image indicating that the printing operation is in progress, but, if completed (step S804 - Yes), there is displayed an image indicating that the printing operation is over.

(Other service processes)

[0128] In the foregoing there have been explained the operations of the kiosk terminal 110 in the information print service. In the following there will be explained the information registration service (data deposit service), personal information service and mail print service.

(Information registration service (data deposit service))

[0129] If the button "Press here for information registration service" 2304 is depressed in the initial image of the kiosk terminal 110 shown in Fig. 23 (step S502 - data deposit in Fig. 5), there is executed a process for the information registration service (step S503).

[0130] Fig. 14 is a flow chart showing the function of the kiosk terminal 110 in providing the information registration service. The user has to register his telephone number for identification. Therefore, there is at first displayed a telephone number input image 3801 as shown in Fig. 38 (step S1401). When the "OK" button is depressed by the user on this image, the entered telephone number is transmitted to the CanDINet control unit (step S1402).

[0131] In response, based on the telephone number, the CanDINet control unit discriminates whether the user is already registered, namely whether the user already has a P-code. If the user already has the P-code, the CanDINet control unit has a user information table for the P-code as shown by 4801 in Figs. 48A and 48B.

[0132] Thus the CanDINet control unit specifies the type of the user (whether the user has the P-code) from the entered telephone number and transmits such type to the kiosk terminal 110. The kiosk terminal 110 thus receives the transmitted user type (step S1403) and discriminates whether the user is a P-code holder (step S1404).

[0133] If the user is not a P-code holder (step S1404 - No), the sequence immediately shift to a step S1408, but, if the user is a P-code holder (step S1404 - Yes), there is displayed a password input image 3802 shown in Fig. 38 for causing the user to enter a password. Then the password is transferred to the CanDINet control unit (step S1406), which in response executes identification of the user. If the CanDINet control unit informs that the password is correct (step S1407 - Y), the sequence proceeds to a step S1408. If it is informed that the password is not correct (step S1407 - N), the sequence returns to the step S1405 for the password reentry by the user.

[0134] A step S1408 displays an image for the information registering method (data depositing method).

[0135] The information can be registered either by scanning the image with a scanner, or by information input from an external equipment. In the former case, the user uses the scanner to scan a paper medium such as a notebook or a book. In the latter, the user enters the information into the kiosk terminal 110 from a notebook computer or a mobile terminal through a cable or by a wireless channel.

[0136] Therefore the information registering method image shown in Fig. 39 has a "scanner" button 3901 and an "external equipment" button 3902, and there is discriminated the depressed button (step S1409).

[0137] If the "scanner" button 3901 is depressed (step S1409 - Yes), there is executed a scanner process (step S1410). Fig. 15 is a flow chart showing the function of the kiosk terminal 110 in the scanner process. When the user selects the use of the scanner, there is at first displayed a scanner input designating image as shown in Fig. 40 (step S1501).

[0138] When the user sets the original and depresses the "OK" button 4001 in the scanner input designating image (step S1502 - Yes), the scanner is caused to execute a scanning operation (step S1503). Then there is discriminated whether the original reading is successful (step S1504).

[0139] If not successful (step S1504 - N), the sequence returns to the step S1501 for repeating the original reading. If successful (step S1504 - Y), there is displayed a preview image of the read image data (step S1505). Fig. 41 shows an example of the preview image, which includes a preview image 4101, a "next" button 4102, a "register other data" button 4103, and a "cancel registration" button 4104. Then there is discriminated the depressed button (step S1506).

[0140] If the "register other data" button 4102 is depressed (step S1506 - Yes), the image data read in the step S1503 are stored in the RAM 19 or the external memory 14 (step S1507). Then the scanner input des-

ignating image shown in Fig. 40 is displayed again (step S1510), and, when the "OK" button therein is depressed (step S1511), the sequence returns to the step S1503.

[0141] If the "next" button is depressed on the preview image shown in Fig. 41 (step S1506 - No, step S1508 - Yes), the finally read image data are stored in the RAM 19 or the external memory 14 (step S1509) and the sequence is terminated. If the "cancel registration" button is depressed on the preview image shown in Fig. 41 (step S1506 - No, step S1508 - No), the image data stored in the step S1507 or S1509 are invalidated (or erased), and the sequence returns to the step S1401.

[0142] If the "external equipment" button 3902 is depressed on the information registration method image shown in Fig. 39 (step S1409 - No), there is executed a process similar to the scanner process (step S1411). The details of the step S1411 will not be explained.

[0143] After the process of the steps S1410 and S1411, there is displayed a password setting image shown in Fig. 42. This password has to be entered in case the information registered in this service is printed by the user or by another person.

[0144] Then there is displayed an effective term input image as shown in Fig. 43 (step S1602), and the term of registration of the information is selected by the user. In the effective term input image shown in Fig. 43, the user can select "until tomorrow", "1 week" or "1 month", and the kiosk terminal 110 memorizes the selected term.

[0145] Subsequently, the entered image data, type thereof, page number thereof, password and effective term are transferred to the CanDINet control unit, which in response issues a P-code for the registered information. Then there are received the P-code and the registration charge transmitted from the CanDINet control unit (stp S1604).

[0146] Finally, there are displayed, as shown in Fig. 44, the P-code, password, data amount, effective term and registration charge for the deposited image data. In the example shown in Fig. 44, the registered image data can be printed out in the information print service, by designating the P-code "09027648234#4". The P-code is effective for one week, and the registered image data can no longer be printed by this P-code. The sequence is terminated upon depression of the "OK" button 4401 by the user.

(Personal information service)

[0147] If the step S511 in Fig. 5 identifies that the service type is other than the information print service (step S511 - No), there are executed other service processes (step S512). Fig. 11 is a flow chart showing the function of the kiosk terminal 110 in such another service process. In the present embodiment, other services include the mail print service and the personal information service, so that there is discriminated whether the service type is the mail print service or the personal information service.

[0148] If the service type is the personal information service (step S1101 - personal information service), there is executed a process for the personal information service (step S1103).

[0149] More specifically, the discrimination whether the service type is the personal information service is executed in the following manner. When the entered P-code is transmitted to the CanDINet control unit 100 in the step S509 in Fig. 5, the CanDINet control unit 100 discriminates if the entered P-code is "telephone number##" or "telephone number##number)". If so, the service type is identified as the personal information service and such service type is returned to the kiosk terminal. Fig. 12 is a flow chart showing the function of the kiosk terminal 100 in providing the personal information service.

[0150] At first there is displayed a password input image 3802 shown in Fig. 38 (step S1201) for requesting the user to enter the password. Upon confirmation of the password entry by the user, the entered password is transferred to the CanDINet control unit (step S1202). In response, the CanDINet control unit searches, based on the P-code transmitted from the kiosk terminal 110 in the step S509 in Fig. 5, the user information table corresponding to the P-code. Then the value stored in the password column of the personal information table linked with such user information table is compared with the received password, and, if both coincide, the result is transmitted to the kiosk terminal 110.

[0151] The kiosk terminal 110 receives the response from the CanDINet control unit (step S1203), and discriminates whether the response indicates that the password is correct (step S1204). If the password is not correct (step S1204 - N), the sequence returns to the step S1201 for the reentry of the password by the user. If the password is correct, there is displayed a registration frame image as shown in Fig. 34 (step S1205).

[0152] By registering one or plural P-codes in the registration frame, the user can easily obtain the printout of one or plural information data registered for the registration frame, by simply entering the P-code (called personal P-code in this case) corresponding to the registration frame into the kiosk terminal.

[0153] For example, in the registration frame "Yesterday's sumo wrestling/pro baseball" shown in Fig. 34, the user can obtained a personal print containing the information on the sumo wrestling and pro baseball by registering plural P-codes such as those related to the sumo wrestling and those related to the pro baseball in this registration frame.

[0154] A personal P-code is issued for each registration frame, and the personal P-code in this case is given by "user P-code##frame number)". As an example, if the user P-code entered in the step S507 in Fig. 5 is "24535", the personal P-code for the first registration

frame shown in Fig. 34 is "24535##1".

[0155] When the user selects the personal information service in the registration image shown in Fig. 60, the personal P-code is registered in the "personal P-code service information" column of the user information table shown in Figs. 48A and 48B, and the personal P-code table is prepared as shown in Fig. 49. Since this is the first registration frame, the personal P-code becomes "user P-code ##1". There can be prepared plural registration frames, and the personal P-code for the second registration frame becomes "user P-code ##2". In the present embodiment, the user P-code is assumed to be the telephone number of the user. The P-code registered for the registration frame is stored in the "P-code list" shown in Fig. 49.

[0156] The information corresponding to the P-code registered for the registration frame may be fixed information, but is generally variable in time, such as "stock market final price" or "tomorrow's weather forecast".

[0157] Stated differently, the information data corresponding to the P-code stored in the "P-code list" shown in Fig. 49 can be renewed in time. Also the P-code stored in the "P-code list" can be the personal P-code (this personal P-code being referred to as B, while the original personal P-code being referred to as A), and, in such case, among the personal P-codes registered as B, the one with the latest information data can be made the personal P-code registered as A.

[0158] Figs. 81 and 82 are flow charts showing the function of the CanDINet control unit 100 in displaying the registration frame image in the step S1205. At first, from the P-code entered in the kiosk terminal 110, there is extracted a part of the user P-code (telephone number) (step S8101). Then the user information table shown in Figs. 48A and 48B is searched with the user P-code, whereby the information on such user p-code is acquired (step S8102). If the user receives the personal information service, the personal P-code is issued to such user and is stored in the user information table (personal P-code service information).

[0159] Then there is discriminated whether the P-code entered by the kiosk terminal 110 is terminated by "##" (step S8104), and, if not, namely if the personal P-code is directly entered, there is executed a flow chart shown in Fig. 82. If it is terminated by "##", there is executed a process of steps S8105 to S8110 in order to acquire information on all the P-codes issued to this user.

[0160] In case the P-code is terminated with "##", the personal P-codes are acquired one by one from the list thereof contained in the aforementioned personal P-code service information (step S8105). Then the P-code table for the personal P-code service is searched with thus obtained personal P-codes to acquire the information relating thereto (step S8106).

[0161] If the P-code is registered in the registration frame, such registered P-code is stored in the P-code table for the personal P-code service (registered P-code information). Therefore, the P-codes are acquired one by one from the P-code list contained in the registered P-code information (step S8107).

[0162] Then the IP information registration table shown in Fig. 46 is searched with thus acquired P-codes to obtain information relating thereto (step S8108). The information thus acquires includes, for example, the title of the P-code.

[0163] In acquiring the information relating to the P-code, there is checked an identifier portion of the IP information registration table. At first there is discriminated whether a "link" column stores the P-code of a linked object. If the P-code is stored, the linked object of the P-code has tangible information (such as information data to be printed), so that the IP information registration table shown in Fig. 46 is reconstructed with thus linked P-code in order to acquire the information relating to such P-code.

[0164] In case the "link" column does not store the P-code of the linked object, there is then discriminated whether a sub-code is present, by checking the value stored in "flag for sub-code" column. The sub-code, if present, is frame information.

[0165] The frame information is equivalent to the registration frame described above, but is different in that it is provided by the information provider. Stated differently, in case the information provider wishes to provide plural information (for which P-codes are respectively issued) under a P-code, there is prepared frame information. For example, the history of information data varying in time is managed by the sub-code, in such a manner that the access to the history can be made with a single P-code.

[0166] It is assumed that the largest sub-code indicates the latest information, and, if the sub-code is identified present, the IP information registration table is searched again with the largest one of the P-codes stored in the "sub-code" area, whereby the information on such P-code is acquired.

[0167] Then there is discriminated whether the P-code acquired in the step S8107 is the last one in the registered P-code information (step S8109), and, if not, the sequence returns to the step S8107 for acquiring the information on the next P-code.

[0168] If it is the last one, there is discriminated whether the personal P-code acquired in the step S8105 is the last one in the personal P-code service information (step S8110), and, if it is not the last one, the sequence returns to the step S8105 for acquiring the information on the next personal P-code, but, if it the last one, the sequence proceeds to a step S8111.

[0169] On the other hand, if the step S8104 identifies that the P-code is not terminated with "##", the P-code table for the personal P-code service in Fig. 49 is searched with the entered personal P-code to acquire the information on such personal P-code (step S8112).

[0170] Then the P-codes are acquired one by one from the P-code list in the registered P-code information

(step S8113), and the IP information registration table is searched with such P-codes to acquire the information thereon (step S8114). The acquired information is similar to that in the step S8108.

[0171] Finally, there is discriminated whether the P-code acquired in the S8113 is the last one in the registered P-code information (step S8115). If not, the sequence returns to the step S8113 for acquiring the information on the next P-code, but, if it is the last one, the sequence proceeds to the step S8111.

[0172] A step S8111 transmits the information acquired in the step S8106, S8108, S8112 or S8114 to the kiosk terminal 110. Such information includes the title of the personal P-code (registration frame) and the title of each registered P-code. Based on this information, the kiosk terminal 110 generates the display image shown in Fig. 34 or 36.

[0173] The registration frame image in Fig. 34 includes a list 3411 of the registration frames currently prepared by the user, an "information registration/change" button 3406, a "print preview" button 3407, a "print" button 3408 and "yes" "no" buttons

[0174] The kiosk terminal 110 discriminates the button depressed in the registration frame image (step S1206). If the "yes" or "no" button is depressed (step S1206 - yes/no), there is accordingly changed a flag indicating whether or not to print each registration frame, and the display image is also accordingly changed.

[0175] If the "information registration/change" button is depressed (step S1206 - registration change), there is executed a process of changing the registration (step S1207). Fig. 13 is a flow chart showing the function of the kiosk terminal 110 in case of the process for registration change. At first, the kiosk terminal 110 displays a registration changing image as shown in Fig. 35. The image includes numeral keys for designating the registration of a new frame, an "OK" button 3502, and a "new frame registration" button 3501 for instructing the registration of a new frame, and the kiosk terminal 110 discriminates the depressed button (step S1302).

[0176] If the "new frame registration" button 3501 is depressed (step S1302 - registration), a new frame is prepared (step S1303) and is listed on the registration frame image shown in Fig. 34.

[0177] If the numeral keys are depressed followed by the depression of the "OK" button 3502 (step S1302 - change), the entered frame number is specified (step, S1304), and the content of the registration frame corresponding to such frame number is displayed as shown in Fig. 36 (step S1305). This display includes a list 3640 of the P-codes registered in the registration frame, a "add new P-code" button, "yes", "no" buttons for designating whether or not to register each P-code, an "OK" button and a "return" button.

[0178] The kiosk terminal 110 discriminates whether any of these buttons has been depressed on this image (step S1306). If the "yes" or "no" button is depressed (step S1306 - yes, no), there is changed a flag indicating whether or not to register each P-code, and the display image is accordingly changed (step S1307).

[0179] In case there is selected not to register a P-code, such selection is transmitted from the kiosk terminal 110 to the CanDINet control unit 100, which in response deletes such P-code from the P-code list of the registered P-code information shown in Fig. 49.

[0180] If the "add new P-code" button 3606 is depressed (step S1306 - new code), the code input image is displayed for causing the user to enter a P-code. Then the entered P-code is transferred to the CanDINet control unit 100, whereby the content of the information data corresponding to the P-code is received. Then the newly registered P-code is listed on the image shown in Fig. 36 (step S1312), and the sequence returns to the step S1306.

[0181] If the "return" button is depressed on the image shown in Fig. 36 (step S1306 - other; step S1308 - return), the sequence returns to the step S1304, but, if the "OK" button is depressed (step S1306 - other, step S1308 - OK), the present process is terminated.

[0182] If the "print preview" button 3407 is depressed in the registration frame image shown in Fig. 34 (step S1206 - preview), the information data corresponding to the P-code registered in the registration frame are received, and the preview image is displayed, based on such data. Otherwise there are received preview data schematically representing the above-mentioned data and the preview image may be displayed based on such schematic preview data. Also in this step, there may be displayed an image as shown in Fig. 37, for enabling the selection of the sheet size or the sheet direction. When the "OK" button is depressed on the preview image, the sequence returns to the step S1205.

[0183] Finally, when the "print" button is depressed on the registration frame image shown in Fig. 34 (step S1206), there is executed the print charge process (step S1210). The print charge process is as shown in Fig. 7. In the present embodiment, the advertisement is assumed to be printed with the predetermined output format in case of the personal information service. However, it is also possible, as in the information print service, to form an "advertisement setting" button in the registration frame image shown in Fig. 34, and to provide a process similar to that of the step S604 and S609 in Fig. 6, after the step S1206.

[0184] After the print charge process, there is discriminated whether the printing is charged or not (step S1211). If it is free of charge (step S1211 - N), there is immediately executed the printing process (step S1213), but, if it is charged (step S1211 - Y), the present process is terminated without executing the printing.

(Mail print service)

[0185] In case the step S1101 in Fig. 11 identifies that the service type is the mail print service (step S1101 - mail print service), there is executed a process for the mail print service (step S1102).

[0186] The process of the mail print service is similar to that of the information service shown in Fig. 6, except that the step S602 in Fig. 6 receives the property data and preview image data of the mail instead the property data and preview image data of the information, from the CanDINet control unit 100.

[0187] Also the step S602 display a mailbox image shown in Fig. 32, instead of the image shown in Fig. 29. The mailbox image in Fig. 32 includes a mail list 3211 addressed to the user, print setting buttons 3204, 3205, 3206 for the respective items, an "option" button 3207, a "print preview display" button 3207, a "print" button 3208, a "return" button 3209 and a "cancel" button 3210. The difference from the information service process lies in a fact that, when the "option" button is depressed, an image shown in Fig. 33 is displayed to allow the user to select the method of mail printout. As the mails are principally transmitted by text data, plural mails can be collectively printed on a sheet, and the user can execute selection as shown in Fig. 33.

[0188] In the present embodiment, the advertisement is assumed to be printed with the predetermined output format in case of the mail print service. It is also possible, however, as in the case of information print service, to provide the "advertisement setting" button in the mailbox image shown in Fig. 32 and to provide a process similar to the steps S604 and S609 in Fig. 6.

(Charge settling process)

[0189] Each service process is terminated in the step S512 in Fig. 5 but the printing process is not executed in such service process, there is displayed a charge settling image as shown in Fig. 28 (step S514) and a charge settling process is executed (step S515).

[0190] The charge settling image shown in Fig. 28 includes a "cash payment" button 2801, a "credit card" button 2802, an "on-line settlement" button 2803, a "debit card" button 2804, a "prepaid card" button 2805 etc. for enabling the user to select a desired method among plural settling methods.

[0191] Fig. 9 is a flow chart showing the function of the kiosk terminal 110 in the charge settlement process. After the display of the charge settling image, there is discriminated the button depressed by the user (step S902). If the "cancel" button is depressed (step S902 - cancel), an instruction for cancellation is given to the CanDINet control unit 100 and the sequence returns to the step S501 in Fig. 5.

[0192] If the "on-line settlement" button 2803 is depressed (step S902 - online process), there is displayed an image for entering the name and the password (step S909), and the entered information is transferred to the CanDINet control unit 100 (step S910) for executing a predetermined on-line process.

[0193] If the "debit card" or "credit card" button is depressed (step S902 - debit/credit card), there is at first read the card information (step S904). Then there is discriminated whether card reading is successful (step S905), and, if not (step S905 - N), the sequence returns to the step S904.

[0194] If successful (step S905 - Y), the on-line process is requested to the CanDINet control unit 100 based on the card information (step S907), and the result of the on-line process is received (step S907). If the result of the on-line process indicates that the settlement is not possible (step S908 - No), the sequence returns to the step S902 for causing the user to select another settling method, but, if the settlement is possible (step S908 - Yes), the sequence proceeds to the printing process.

[0195] If the "cash payment" button is depressed (step S902 - cash), there is executed a cash payment process (step S903). Fig. 10 is a flow chart showing the function of the kiosk terminal 110 in the cash payment process. Depending on the option of the kiosk terminal or the operating principle of the store, the cash payment may be achieved by cash payment at the pay counter of the store or by cash deposit in a coin receiver provided in the kiosk terminal 110.

[0196] In cash of cash payment at the store counter, namely in case a bar code is to be printed on the sheet (step S1001 - Y), bar code print data are generated according to the print charge, in preparation for attaching to the print data received from the CanDINet control unit 100.

[0197] In case of cash deposit into the coin receiver (step S1001 - N), there are counted coins (step S1002), and there is discriminated whether the deposited cash covers the print charge (step S1003). The process is terminated when the print charge is paid (step S1003 - Yes).

[0198] When the settlement is completed by any of the settling methods, the printing process is executed (step S912).

(Generation of print data)

[0199] In the following there will be explained the function of the CanDINet control unit 100 in generating the print data, based on the P-code transmitted from the kiosk terminal 110 and the output format of the advertisement. When the print data are requested from the kiosk terminal 110, the CanDINet control unit 100 starts generation of the print data. Fig. 53 is a basic flow chart showing the function of the CanDINet control unit 100 in generating the print data, and Fig. 17 is a flow chart showing the function of the CanDINet control unit 100 in generating the print data with advertisement. In the following description, reference is made to the flow chart

shown in Fig. 17. In the following there will principally be explained a case of generating the print data from the information data, but the process remains same even when the information data are replaced by mail data.

[0200] At first the CanDINet control unit 100 acquires a P-code for which the user wishes printout (step S1701). When the print data are requested from the kiosk terminal, the P-code is also delivered therefrom, so that the P-code is acquired at this point.

[0201] Then the CanDINet control unit 100 acquires the advertisement setting (output format of advertisement) (step S1702). In the information print service in the present embodiment, the user can select the output format of the advertisement on the kiosk terminal 110 (based on the display image shown in Fig. 31), so that the output format transmitted from the kiosk terminal is acquired. Also in case the information provider 130 designates the condition whether or not to insert the advertisement at the issuance of the P-code from the CanDINet control unit 100, such condition is stored in the basic property of the information of the IPO information registration table (1601 in Fig. 46) corresponding to the P-code, so that the output format of the advertisement is determined according to such condition.

[0202] Then the information data, corresponding to the P-code acquired in the step S1701, are acquired from the database (step S1703). Also there is discriminated whether or not to generate the print data with advertisement, based on the output format of the advertisement acquired in the step S1702 (step S1704).

[0203] In case of generating the print data with advertisement (step S1704 - Yes), there are executed in succession a sheet size determination process (step S1705), a layout determination process (step S1706), an advertisement size determination process (step S1707), and an advertisement search process (step S1708). In case of generating the print data without advertisement (step S1704 - No), there are executed in succession a sheet size determination process (step S1709) and a layout determination process (step S1710).

[0204] These processes will be explained in the following.

(Sheet size determination process)

[0205] Fig. 18 is a flow chart showing the function of the CanDINet control unit 100 in the sheet size determination process. At first the service type is confirmed, and there is discriminated whether the service type is the mail print service (step S1801). If not the mail print service (step S1801 - Y), the process is started according to the flow chart shown in Fig. 18. If the service type is the mail print service (step S1801 - N), the process is started according to the flow chart shown in Fig. 19.

[0206] At first, a step S1802 sets the sheet size at a basic sheet size. The basic sheet size is the sheet size designated in the registration image shown in Fig. 63 in case the user applies for the registration to the CanDINet control unit 100, or the sheet size designated on a display image as shown in Fig. 37 in case the user can designate the sheet size on such display image on the kiosk terminal. If the user does not execute designation in either case, the basic sheet size is set as A4 size. The information necessary for determining the sheet size is memorized in a table format 4502 in Fig. 45 according to the designation by the user, in case the user applies for the registration to the CanDINet control unit 100, but in a format 4503 in Fig. 45 if the user does not apply for the registration to the CanDINet control unit 100.

[0207] Then there is acquired the information size of the initial information data (step S1803). The above-mentioned information size is not the data amount of the information data but indicates the print size on the print sheet. In the present embodiment, when the information provider 130 registers the information data in the CanDINet control unit 100, the setting of printout of the information data is stored in a table format 4501 as shown in Fig. 45.

[0208] Then, according to the priority flag 4502 or 4503 in Fig. 45, there is discriminated whether the priority is given to the visibility or page number in the print data generation (step S1804). If the priority is given to visibility, a temporary sheet size is calculated by information size × reduction limit value (step S1805). If the priority is given to page number, a temporary sheet size is selected equal to the information size (step S1809).

[0209] Then there is discriminated whether the temporary sheet size determined in the step S1805 or S1809 is larger than the sheet size (step S1806). If the temporary sheet size is larger than the sheet size (step S1806 - Yes), there is selected the minimum sheet size satisfying the condition that sheet size = temporary sheet size (step S1810). If the temporary sheet size is not larger than the sheet size, or if the temporary sheet size is same as the sheet size, the temporary sheet size is selected as the sheet size (step S1807).

[0210] Once the sheet size is determined, there is discriminated whether next information data are present (step S1808). If present (step S1808 - Yes), there is acquired the information size of such information data (step S1811) and the sequence returns to the step S1804. If the next information data are absent (step S1808 - No), the final sheet size is determined from the current sheet size and the standard advertisement ratio, and the present process is terminated.

[0211] On the other hand, if the service type is the mail print service, a process is executed according to the flow chart shown in Fig. 19. At first, a step S1901 sets the sheet size at a basic sheet size. The basic sheet size is the sheet size designated in the registration image shown in Fig. 63 in case the user applies for the registration to the CanDINet control unit 100, or the sheet size designated on a display image as shown in Fig. 37 in case the user can designate the sheet size on such display image on the kiosk terminal. If the user

does not execute designation in either case, the basic sheet size is set as A4 size. The information necessary for determining the sheet size is memorized in a table format 4502 in Fig. 45 according to the designation by the user, in case the user applies for the registration to the CanDINet control unit 100, but in a format 4503 in Fig. 45 if the user does not apply for the registration to the CanDINet control unit 100.

[0212] Then there is acquired the information on the initial mail (step S1902). The above-mentioned information on mail includes whether the mail has an attached image file, and the size of such image file if it is present.

[0213] Then there is discriminated whether an image file is attached to the mail (step S1903). If not attached (step S1903 - No), a temporary sheet size is selected as 0 × 0 (step S1907). If the image file is attached (step S1903 - Yes), the sequence proceeds to a step S1904.

[0214] Then, according to the priority flag 4502 or 4503 in Fig. 45, there is discriminated whether the priority is given to the visibility or page number in the print data generation (step S1904). If the priority is given to visibility, a temporary sheet size is calculated by image file size × reduction limit value (step S1905). If the priority is given to page number, a temporary sheet size is selected equal to the image file size (step S1906).

[0215] Then there is discriminated whether the temporary sheet size determined in the step S1905, S1906 or S1907 is larger than the sheet size (step S1908). If the temporary sheet size is larger than the sheet size (step S1908 - Yes), there is selected the minimum sheet size satisfying the condition that sheet size = temporary sheet size (step S1910). If the temporary sheet size is not larger than the sheet size, or if the temporary sheet size is same as the sheet size, the temporary sheet size is selected as the sheet size (step S1909).

[0216] Once the sheet size is determined, there is discriminated whether a next mail is present (step S1911). If present (step S1911 - Yes), there is acquired the information on such mail (step S1912) and the sequence returns to the step S1903. If the next mail is absent (step S1911 - No), the final sheet size is determined from the current sheet size and the advertisement ratio, and the present process is terminated. In the present embodiment, the advertisement ratio is selected same as the standard ratio of the amount of the advertisement 4502 or 4503 in Fig. 45.

(Layout determination process)

[0217] In the following there will be explained the layout determination process. Fig. 20 is a flow chart showing the function of the CanDINet control unit 100 in the layout determination process. At first the CanDINet control unit 100 executes an advertisement area securing process for securing an advertisement area (step S2001).

[0218] Fig. 80 is a flow chart showing the function of the CanDINet control unit 100 in the advertisement area securing process. At first there is determined the ratio of the amount of advertisement (step S8001). In the present embodiment, the advertisement ratio is selected same as the standard ratio of the amount of the advertisement 4502 or 4503 in Fig. 45. However, if the user selects not to print in the space of the information, in the input image shown in Fig. 31 and also selects either or both of (1) printing the advertisement on the back side and (2) printing the advertisement on the separate sheet, the advertisement ratio in this stage is selected as 0. It is however memorized to form an advertisement area on the back side in case of selection (1), and to form an advertisement area on another sheet in case of selection (2).

[0219] Then there is discriminated whether a predetermined layout is to be used for all the services, or the layout is to be changed for different service types. This is determined according to the mode of the CanDINet control unit 100 for providing the advertisement service.

[0220] If the predetermined layout is to be used for all the services, the advertisement area is secured with such predetermined layout. In this case, the size of the advertisement area follows the ratio of amount of the advertisement. In the present embodiment, the predetermined layout is given by 7902 in Fig. 79.

[0221] If the layout is to be changed according to the service type, the advertisement area is secured with a layout corresponding to each service type. Also in this case, the size of the advertisement area follows the ratio of amount of the advertisement. In the present embodiment, the layout for the mail print service is given by 7901 or 7902 in Fig. 79, that for the information service and the personal information service is given by 7903 or 7904, and that for the information registration service (data deposit service) is given by 7906.

[0222] In the flow chart in Fig. 20, there is assumed a layout 7902. After the step S2001, according to the priority flag 4502 or 4503 in Fig. 45, there is discriminated whether the priority is given to the visibility or page number in the print data generation.

[0223] If the priority is given to visibility (step S2002 - Yes), there is acquired the information size of the initial information data (step S2003). Then the information data are placed at the upper left corner of the sheet (Fig. 20 ①), and there is secured an area corresponding to the information size, for placing such information data (step S2004).

[0224] Then there is discriminated whether next information data are present (step S2005). If present (step S2005 - Yes), there is acquired the information size of such information data (step S2006). Then such next information data are placed under the initial information data (Fig. 20 ②) and there is secured an area corresponding to the information size for placing such next information data (step S2004). This process is repeated until the next information data are no longer

present. In case the step S2004 places the information data and tries to secure the area of the information size for placing such information data but such area overflows from the sheet size or invades the advertisement area, the layout is made on the next page.

[0225] If the priority is given to the page number in generating the print data (step S2002 - No), there is at first acquired the information size of the initial information data (step S2007), which is then multiplied by the reduction limit value (step S2008). In case the information data include a text and an image, and an item "size variable" is checked in the registration display image shown in Fig. 75, the reduction limit value is multiplied, within the variable range, on each of the text and the image. Then the information data are placed at the upper left corner of the sheet (Fig. 20 ①), and there is secured an area of (information size × reduction limit value), for placing such information data (step S2009).

[0226] Then there is discriminated whether next information data are present (step S2010). If present (step S2010 - Yes), there is acquired the information size of such information data (step S2011). Then such next information data are placed under the initial information data (Fig. 20 ②) and there is secured an area of (information size × reduction limit value) for placing such next information data (step S2008). This process is repeated until the next information data are no longer present.

[0227] When the next information data are no longer present (step S2010 - No), the area containing the information data is enlarged within an extent not overflowing from the sheet size and not invading the advertisement area (step S2012), thereby expanding the information data as far as possible.

[0228] If the step S2009 places the information data and tries to secure the area of the information size for placing such information data but such area overflows from the sheet size or invades the advertisement area, the layout is made on the next page.

(Advertisement area determination process)

[0229] In the following there will be explained a process for determining the advertisement area. Fig. 21 is a flow chart showing the function of the CanDINet control unit 100 in determining the advertisement area.

[0230] At first, the advertisement area is selected as the print area by the printing unit of the kiosk terminal minus the information data area (step S2101).

[0231] Then there is prepared a variable "advertisement size", which is initially selected as the largest advertisement size (step S8302). In the present embodiment, the advertisement size is limited to predetermined plural sizes. The advertisement provider is to select one of such predetermined sizes at the registration of the advertisement.

[0232] Then there is discriminated whether the advertisement size can be accommodated in the advertisement area (step S2103). If accommodatable (step S2103 - Yes), there is secured an advertisement area of such advertisement size (step S2104), and the advertisement area is defined as the remaining advertisement area after such securing (step S2105).

[0233] If the advertisement size cannot be accommodated in the advertisement area (step S2103 - No), there is discriminated whether the advertisement size is the smallest advertisement size (step S2106). If there is a smaller advertisement size (step S2106 - No), the next largest advertisement size is selected as the advertisement size (step S2107) and the sequence returns to the step S2103. If there is no smaller advertisement size (step S2106 - Yes), the present process is terminated. In the step S2104, there are memorized the secured advertisement size and the secured location.

[0234] In the following there will be explained the process of determining the advertisement area in case the advertisement is to be printed on the back side or on another sheet. Figs. 83 to 85 are flow charts showing the function of the CanDINet control unit 100 in determining the advertisement area.

[0235] At first, the advertisement area is selected as the print area by the printing unit of the kiosk terminal minus the information data area (step S8301).

[0236] Then there is prepared a variable "advertisement size", which is initially selected as the largest advertisement size (step S8302). In the present embodiment, the advertisement size is limited to predetermined plural sizes. The advertisement provider is to select one of such predetermined sizes at the registration of the advertisement.

[0237] Then there is discriminated whether the advertisement size can be accommodated in the advertisement area (step S8303). If accommodatable (step S8303 - Yes), there is secured an advertisement area of such advertisement size (step S8304), and the advertisement area is defined as the remaining advertisement area after such securing (step S8305).

[0238] If the advertisement size cannot be accommodated in the advertisement area (step S8303 - No), there is discriminated whether the advertisement size is the smallest advertisement size (step S8306). If there is a smaller advertisement size (step S8306 - No), the next largest advertisement size is selected as the advertisement size (step S8307) and the sequence returns to the step S8303. If there is no smaller advertisement size (step S8306 - Yes), the sequence proceeds to a step S84 in Fig. 84.

[0239] A flow chart shown in Fig. 84 determines the advertisement area in case the advertisement area is secured on the back side. For this purpose, there is at first discriminated whether an advertisement area is secured on the back side (step S8401). The discrimination is made by checking whether the step S8001 in Fig. 80 has memorized securing the advertisement area on the back side.

[0240] If the advertisement area is secured on the

back side, the advertisement area is selected as the print area by the printing unit of the kiosk terminal minus the information data area (step S8402). Steps S8403 to 8408 will not be explained as they are similar to the step S8303 to S8308 in Fig. 83. In case the step S8407 identifies the absence of smaller advertisement size, the sequence proceeds to a step S8501 in Fig. 85.

[0241] When an advertisement area is secured in another sheet, the flow chart in Fig. 85 executes a process for determining the advertisement area. For this purpose, there is at first discriminated whether an advertisement area is secured on another sheet (step S8501). The discrimination is made by checking whether the step S8001 in Fig. 80 has memorized securing the advertisement area on another sheet.

[0242] If the advertisement area is secured on another sheet, the advertisement area is selected as the print area by the printing unit of the kiosk terminal (step S8502). Steps S8503 to 8508 will not be explained as they are similar to the step S8303 to S8308 in Fig. 83. In case the step S8507 identifies the absence of smaller advertisement size, the advertisement area determining process is terminated. The steps S8304, S8404 and S8504 memorize the secured advertisement size and the secured location.

[0243] In an example shown in Fig. 54, the advertisement areas are secured in succession for the advertisements 1, 2, 3 and 4, with respective areas of 10×20, 10×10, 5×10 and 5×10.

(Registration of advertisement)

[0244] In the present embodiment, the advertisement provider wishing to insert an advertisement applies for registration to the CanDINet control unit 100. For this purpose, the advertisement provider makes access to the CanDINet control unit 100 through the network and enters information necessary for the registration on the registration display images as shown in Figs. 64 to 70.

[0245] On the registration display image shown in Fig. 64, the advertisement provider enters the name and the contact address. If the registration is already applied for, there may be entered a password for changing the registration. On the registration display image shown in Fig. 65, there are designated the image data and text data (hereinafter collectively called advertisement data) for advertisement insertion, whereby the advertisement data are transferred to the CanDINet control unit 100.

[0246] On the registration display image shown in Fig. 66, the advertisement provider designates the starting data and the effective period of the advertisement insertion. The advertisement data are no longer used for advertisement insertion when the effective period after the starting date expires. On the registration display image in Fig. 67, a limitation can be designated on the geographical area in which the advertisement data are printed.

[0247] On the registration display image shown in Fig. 68, the advertisement provider can select the printed advertisement size among the predetermined sizes, and whether the advertisement size can be changed or not.

[0248] Also on the registration display image shown in Fig. 69, there can be designated a full-page advertisement, a top-printed advertisement or a back-printed advertisement. On the registration display image shown in Fig. 70, there can be designated a limit on the number of printings of the advertisement and a limit on the print charge.

[0249] After the registering operation of the advertisement provider on the registration images in Figs. 64 to 70, the CanDINet control unit 100 issues a P-code to such advertisement data. At the same time an advertisement information table corresponding to such P-code is prepared from the information entered on the registration display images and is stored in the P-code DB.

[0250] Fig. 47 shows an example of the advertisement information table 4701, containing the P-code in the left-end column. The table also contains the property of the advertisement corresponding to the P-code and the file information of the advertisement data.

(Advertisement search process)

[0251] In the following there will be explained the advertisement search process in the step S1711 in Fig. 17. Fig. 22 is a flow chart showing the function of the CanDINet control unit 100 in the advertisement search process. At first there is prepared a keyword list for searching the advertisement to be inserted (step S2201). The keyword list is prepared, according to the service type, either from the keyword list memorized in the basic property of the information of the IP information registration table (4601 in Fig. 46) corresponding to the P-code of the information data to be printed, or from the user profile of the user information table (4801 in Figs. 48A and 48B) corresponding to the P-code of the user, or from the terminal information table (Fig. 52) relating to the kiosk terminal executing the printing operation.

[0252] Fig. 57 shows an example of the keyword list 5701 prepared from the IP information registration table relating to the P-code corresponding to the article (information data). The keyword list contains keywords and weights thereof in pair.

[0253] Fig. 57 also shows an example of the keyword list 5702 prepared from the terminal information table. The keywords are "Shibuya" and "Tokyo", since this kiosk terminal is placed in Shibuya in Tokyo city.

[0254] Then there are prepared a keyword list of highest priority and a keyword list of lowest priority. The highest priority keyword list is prepared when a group of specified advertisements is to be preferentially inserted

with a limitation in the geographical area or in time. Also the lowest priority keyword list is prepared for example when the keyword list is not prepared in the step S2202.

[0255] The above-mentioned plural keyword lists are arranged in the descending order of priority as indicated by 5703 in Fig. 57, and the keyword list of the highest priority is specified (step S2203).

[0256] Then a keyword in thus specified keyword list is used as the search key for searching the advertisement data (step S2204). The P-code (advertisement ID) of the detected advertisement data is entered in a search result list (step S2205). Then there is discriminated whether the search has been executed with all the keywords in the specified keyword list as the search key (step S2206), and, if executed (step S2206 - Yes), the sequence proceeds to a step S2207, but, if not, the sequence returns to the step S2204.

[0257] A step S2207 determines the level of matching on the advertisement data have the advertisement P-code in the search result list. The matching level is calculated by multiplying the weight of the keyword detecting the advertisement data by the priority of the keyword list to which the keyword belongs. It is also possible to determine the matching level anew from the effective period, number of prints, upper limit charge, upper limit print number, unit charge etc. contained in the property of the advertisement relating to the advertisement P-code and to add such matching level to the above-mentioned matching level. It is furthermore possible to determine the matching level anew, higher for a higher freedom of the advertisement, based on the inserting position setting, size adjusting method, laterally or vertically oblong positioning etc. in the property of the advertisement, and to add such matching level to the above-mentioned matching level.

[0258] After the matching level is determined for all the advertisements, the advertisement P-codes in the search result list are sorted with the matching level. Fig. 57 shows an example of the final search result list 5704.

[0259] After the above-described process is executed for a keyword list, there is discriminated whether there is present another keyword list (step S2209). If present (step S2209 - Yes), there is specified a keyword list of the next highest priority (step S2210) and the sequence returns to the step S2204.

(Generation of print data)

[0260] Finally there will be explained the generation of the print data in the step S1711 in Fig. 17. In this step, the print data are generated by selecting to the advertisement data to be inserted, from the secured advertisement size and the secured location stored in the advertisement size determination process of the step S1707 and from the search result list prepared in the advertisement search process in the step S1708.

[0261] The CanDINet control unit 100 selects the advertisement data to be inserted, by discriminating, in the descending order of matching level of the advertisement P-code in the search result list, whether the advertisement size memorized in the advertisement information table corresponding to such P-code matches the advertisement size determined in the advertisement size determination process. In this operation, consideration is made not only on the advertisement size but also on whether the size is adjustable.

[0262] Also if the selected advertisement data include an advertisement designated for page-top insertion, the layout is also changed. For example, if advertisement data designated for page-top insertion are selected for the advertisement 3 in Fig. 54, the layout is changed as shown in Fig. 55.

[0263] Fig. 56 shows an example of the printout of thus generated print data.

[0264] In case the output format of the advertisement determined in the step S1702 in Fig. 17 designates the advertisement printing on the back side or advertisement printing also on the back side, there are at first generated the print data for outputting the information data with the layout determined in the layout determination process (step S1706 in Fig. 17) and then generated are the print data for printing the selected advertisement data on the back side.

[0265] Also in case the output format of the advertisement determined in the step S1702 in Fig. 17 designates the advertisement printing on another sheet, there are at first generated the print data for outputting the information data with the layout determined in the layout determination process (step S1706 in Fig. 17) and, after a page change, there are generated the print data for printing the selected advertisement data on a next page.

[0266] As detailedly explained in the foregoing, the present invention allows to provide a method and a system for information registration/acquisition in a network, and an information processing method, an output control method, an apparatus and a system therefor, including a terminal capable of printing process.

[0267] Also there can be provided an information processing method, an output control method, an apparatus and a system therefor, capable of attaching, in optimum manner, a sponcer advertisement which bears a cost for reducing the information acquiring cost for the user.

[0268] Also there can be provided an information processing method, an output control method, an apparatus and a system therefor, allowing to assign a code to a user mail and to enable mail acquisition by the code, in order to meet the requirements that the electronic mail information sent to the mobile terminal cannot be fully displayed or is to be printed out because of the poor legibility or for the purpose of storage, or that the user without the mobile terminal wishes to read the electronic mail outside his office.

[0269] Also there can be provided an information processing method, an output control method, an appa-

ratus and a system therefor, allowing not only to acquire the individual information by a code but also to assign a code specific to the user to the information selected and integrated according to the desire of the user, and to acquire such information by the code.

[0270] Also there can be provided an information processing method, an output control method, an apparatus and a system therefor, allowing the user to temporarily deposit information owned by the user from a terminal, to acquired an assigned code and to extract the deposited information at any time and at any location by a person knowing such assigned code.

[0271] Also there is provided a U/I including the control command to shorten the input code and to simplify the U/I. The auxiliary information is entered by interactive manner utilizing GUI, and such method is easier than the mere inorganic code for understanding by the user.

[0272] Also the insertion of advertisement variably reduces the charge to be paid by the user, thereby simulating increase in the use of information.

[0273] Also the printed character or image can be expanded or reduced in size within a tolerable range not deteriorating the quality of the obtained print.

[0274] Also the advertisement is charged according to the amount of printing, with an upper or lower limit. Such limit avoids unlimited payment of the advertisement charge.

[0275] Also the variable print charge can be indicated by printing a bar code together with the printing of the information and can be promptly settled, without error, by reading such bar code.

[0276] Also the printing of the advertisement on the back side allows effective utilization of the sheet area even with a simple layout rule, and the advertisement can be inserted without influencing the layout of the information. Also the value of the advertisement is not much lowered since the back side of paper is always visible to the user. Also there can be provided a large advertisement utilizing the entire space of the sheet.

[0277] Also the selection of various information at the store counter can be collectively covered under the unified print instruction, whereby the desired information can be printed by simple operations without cumbersome procedures.

[0278] By installing the information access terminal at the convenience store or the like and obtaining the inexpensive (even free of charge by including advertisement) prints, the user is allowed to acquire simplified information from the mobile terminal and detailed information by print on paper. Such configuration drastically improves the convenience of access to information, and stimulates the sales activity in the convenience store as such location attracts more people.

[0279] Also the user can acquire the necessary information every day by frame registration of a frame or a layout to the personal P-code system.

[0280] Further aspects of the invention are disclosed in accordance with the following numbered clauses;

1. An information processing apparatus comprising:

   readout control means for controlling information readout from first memory means storing first value information indicating the value of output information to be outputted and from second memory means storing second value information indicating the value of additional information to be added to said output information; and

   determination means for determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

2. An information processing apparatus according to clause 1 wherein said output information is present in plural units and said first value information corresponds to said plural output information.

3. An information processing apparatus according to clause 1, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

4. An information processing apparatus according to clause 1, wherein said charge for said output, determined by said determination means, is based on a monetary amount obtained by subtracting from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

5. An information processing apparatus according to clause 1, wherein said charge for said output, determined by said determination means, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

6. An information processing apparatus according to clause 1, wherein said charge for said output, determined by said determination means, may become zero.

7. An information processing apparatus according to clause 4, wherein, in case said monetary amount after subtraction becomes negative, said determination means is adapted to determine the charge for said output as zero.

8. An information processing apparatus according to clause 4, wherein, in case said monetary amount after subtraction becomes negative, said determination means is adapted to determine the charge

for said output as a predetermined amount.

9. An information processing apparatus according to clause 1, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

10. An information processing apparatus according to clause 1, wherein said charge for said output is different for a color output and for a monochromatic output.

11. An information processing apparatus according to clause 1, further comprising discrimination means for discriminating whether or not to attach said additional information to said output information;

wherein said determination means is adapted, in case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

12. An information processing apparatus according to clause 1, wherein the output is a monochromatic output.

13. An information processing apparatus according to clause 1, wherein the output is a color output.

14. An information processing apparatus according to clause 1, wherein said additional information is advertisement information to be attached to said output information.

15. An information processing apparatus according to clause 1, further comprising input means for entering code information indicating said output information.

16. An information processing apparatus according to clause 1, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

17. An information processing apparatus according to clause 1, wherein the output is executed by an electrophotographic printer unit.

18. An information processing apparatus according to clause 1, wherein the output is executed by an ink jet printer unit.

19. An information processing apparatus according to clause 1, wherein the output is associated with a charge settling function.

20. An information processing apparatus according to clause 1, wherein the output is associated with a person verifying function.

21. An information processing apparatus according to clause 1, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

22. An information processing apparatus according to clause 1, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

23. An information processing apparatus according to clause 1, which comprises being based on the presence of an interface with the exterior for acquiring said output information.

24. An information processing apparatus according to clause 1, adapted to recognize status information of an external apparatus for the purpose of output.

25. An output control apparatus comprising:

code input means for entering code information for specifying output information;

setting input means for entering setting information for the output of said output information;

transmission means for transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and

reception means for receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

26. An output control apparatus according to clause 25, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

27. An output control apparatus according to clause 25, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

28. An output control apparatus according to clause 25, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

29. An output control apparatus according to clause 25, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

30. An output control apparatus according to clause 25, wherein said determined charge for said output may become zero.

31. An output control apparatus according to clause 28, wherein, in case said monetary amount after subtraction becomes negative, said charge for said

output is determined as zero.

32. An output control apparatus according to clause 28, wherein, in case said monetary amount after subtraction becomes negative, said charge for said output is determined as a predetermined amount.

33. An output control apparatus according to clause 25, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

34. An output control apparatus according to clause 25, wherein said charge for said output is different for a color output and for a monochromatic output.

35. An output control apparatus according to clause 25, further comprising an operation unit including said code input means and said setting input means.

36. An output control apparatus according to clause 25, wherein the output is a monochromatic output.

37. An output control apparatus according to clause 25, wherein the output is a color output.

38. An output control apparatus according to clause 25, wherein said additional information is advertisement information to be attached to said output information.

39. An output control apparatus according to clause 25, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

40. An output control apparatus according to clause 25, wherein the output is executed by an electrophotographic printer unit.

41. An output control apparatus according to clause 25, wherein the output is executed by an ink jet printer unit.

42. An output control apparatus according to clause 25, wherein the output is associated with a charge settling function.

43. An output control apparatus according to clause 25, wherein the output is associated with a person verifying function.

44. An output control apparatus according to clause 25, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

45. An output control apparatus according to clause 25, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

46. An output control apparatus according to clause 25, further comprising information reception means for receiving the output information specified by said code information transmitted by said transmission means.

47. An output control apparatus according to clause 25, wherein said apparatus is connected to said external apparatus through a network.

48. An output control apparatus according to clause 25, further comprising status transmission means for transmitting a status to said external apparatus.

49. An information providing system composed of an information processing apparatus and an output control apparatus connected through a network:
wherein said information processing apparatus comprising:

code input means for entering code information for specifying output information; and
code transmission means for transmitting said code information entered by said code input means; and
said output control apparatus comprises:
readout control means for controlling information readout from first memory means storing first value information indicating the value of output information to be outputted and from second memory means storing second value information indicating the value of additional information to be added to said output information;
code reception means for receiving said code information; and
determination means for determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception means and the second value information of said additional information to be added in the output to said output information.

50. An information providing system according to clause 49, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

51. An information providing system according to clause 49, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

52. An information providing system according to clause 49, wherein said charge for said output, determined by said determination means, is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

53. An information providing system according to clause 49, wherein said charge for said output, determined by said determination means, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

54. An information providing system according to clause 49, wherein said charge for said output, determined by said determination means, may become zero.

55. An information providing system according to clause 52, wherein, in case said monetary amount after subtraction becomes negative, said determination means is adapted to determine the charge for said output as zero.

56. An information providing system according to clause 52, wherein, in case said monetary amount after subtraction becomes negative, said determination means is adapted to determine the charge for said output as a predetermined amount.

57. An information providing system according to clause 49, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

58. An information providing system according to clause 49, wherein said charge for said output is different for a color output and for a monochromatic output.

59. An information providing system according to clause 49, wherein said information processing apparatus further comprises:

discrimination means for discriminating whether or not to attach said additional information to said output information;
wherein said determination means is adapted, in case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

60. An information providing system according to clause 49, wherein the output is a monochromatic output.

61. An information providing system according to clause 49, wherein the output is a color output.

62. An information providing system according to clause 49, wherein said additional information is advertisement information to be attached to said output information.

63. An information providing system according to clause 49, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

64. An information providing system according to clause 49, wherein the output is executed by an electrophotographic printer unit.

65. An information providing system according to clause 49, wherein the output is executed by an ink jet printer unit.

66. An information providing system according to clause 49, wherein the output is associated with a charge settling function.

67. An information providing system according to clause 49, wherein the output is associated with a person verifying function.

68. An information providing system according to clause 49, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

69. An information providing system according to clause 49, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

70. An information providing system according to clause 49, wherein said information processing apparatus is adapted to recognize the status information of said output control apparatus for the purpose of executing the output.

71. An information providing system according to clause 49, wherein said information processing apparatus comprises:

information transmission means for transmitting said output information, specified by said code information received by said code reception means, to said output control apparatus; and
said output control apparatus comprises information reception means for receiving said output information specified by said code information transmitted by said code transmission means.

72. An information providing system according to clause 49, wherein said information processing apparatus comprises:

information transmission means for transmitting said output information, specified by said code information transmitted by said code transmission means, to said output control apparatus; and
said output control apparatus comprises information reception means for receiving said output information specified by said code information transmitted by said code transmission means.

73. An information processing method comprising:

a readout control step of controlling information readout from a first memory step of storing first value information indicating the value of output information to be outputted and from a second memory step of storing second value information indicating the value of additional information to be added to said output information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

74. An information processing method according to clause 73, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

75. An information processing method according to clause 73, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

76. An information processing method according to clause 73, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

77. An information processing method according to clause 73, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

78. An information processing method according to clause 73, wherein said charge for said output, determined by said determination step, may become zero.

79. An information processing method according to clause 76, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as zero.

80. An information processing method according to clause 76, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as a predetermined amount.

81. An information processing method according to clause 73, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

82. An information processing method according to clause 73, wherein said charge for said output is different for a color output and for a monochromatic output.

83. An information processing method according to clause 73, further comprising a discrimination step of discriminating whether or not to attach said additional information to said output information;

wherein said determination step is adapted, in case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

84. An information processing method according to clause 73, wherein the output is a monochromatic output.

85. An information processing method according to clause 73, wherein the output is a color output.

86. An information processing method according to clause 73, wherein said additional information is advertisement information to be attached to said output information.

87. An information processing method according to clause 73, further comprising an input step of entering code information indicating said output information.

88. An information processing method according to clause 73, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

89. An information processing method according to clause 73, wherein the output is executed by an electrophotographic printer unit.

90. An information processing method according to clause 73, wherein the output is executed by an ink jet printer unit.

91. An information processing method according to clause 73, wherein the output is associated with a charge settling function.

92. An information processing method according to clause 73, wherein the output is associated with a person verifying function.

93. An information processing method according to clause 73, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

94. An information processing method according to clause 73, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

95. An information processing method according to clause 73, based on the presence of an interface with the exterior for acquiring said output information.

96. An information processing method according to clause 73, adapted to recognize status information of an external apparatus for the purpose of output.

97. An output control method comprising:

a code input step of entering code information for specifying output information;

a setting input step of entering setting informa-

tion for the output of said output information;

a transmission step of transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and

a reception step of receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

98. An output control method according to clause 97, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

99. An output control method according to clause 97, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

100. An output control method according to clause 97, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

101. An output control method according to clause 97, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

102. An output control method according to clause 97, wherein said determined charge for said output may become zero.

103. An output control method according to clause 100, wherein, in case said monetary amount after subtraction becomes negative, said charge for said output is determined as zero.

104. An output control method according to clause 100, wherein, in case said monetary amount after subtraction becomes negative, said charge for said output is determined as a predetermined amount.

105. An output control method according to clause 97, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

106. An output control method according to clause 97, wherein said charge for said output is different for a color output and for a monochromatic output.

107. An output control method according to clause 97, further comprising an operation process including said code input step and said setting input step.

108. An output control method according to clause 97, wherein the output is a monochromatic output.

109. An output control method according to clause 97, wherein the output is a color output.

110. An output control method according to clause 97, wherein said additional information is advertisement information to be attached to said output information.

111. An output control method according to clause 97, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

112. An output control method according to clause 97, wherein the output is executed by an electrophotographic printer unit.

113. An output control method according to clause 97, wherein the output is executed by an ink jet printer unit.

114. An output control method according to clause 97, wherein the output is associated with a charge settling function.

115. An output control method according to clause 97, wherein the output is associated with a person verifying function.

116. An output control method according to clause 97, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

117. An output control method according to clause 97, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

118. An output control method according to clause 97, further comprising an information reception step for receiving the output information specified by said code information transmitted by said transmission step.

119. An output control method according to clause 97, wherein said apparatus is connected to said external apparatus through a network.

120. An output control method according to clause 97, further comprising a status transmission step for transmitting a status to said external apparatus.

121. An information providing method for use in an information providing system composed of an information processing apparatus and an output control apparatus connected through a network:

wherein said information processing apparatus comprises:

a code input step of entering code information for specifying output information; and

a code transmission step of transmitting said code information entered by said code input step; and

said output control apparatus comprises:

a readout control step of controlling information readout from a first memory step storing first value information indicating the value of output information to be outputted and from a second memory step storing second value information indicating the value of additional information to be added to said output information;

a code reception step of receiving said code information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception step and the second value information of said additional information to be added in the output to said output information.

122. An information providing method according to clause 121, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

123. An information providing method according to clause 121, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

124. An information providing method according to clause 121, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

125. An information providing method according to clause 121, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

126. An information providing method according to clause 121, wherein said charge for said output, determined by said determination step, may become zero.

127. An information providing method according to clause 124, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as zero.

128. An information providing method according to clause 124, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as a predetermined amount.

129. An information providing method according to clause 121, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

130. An information providing method according to clause 121, wherein said charge for said output is different for a color output and for a monochromatic output.

131. An information providing method according to clause 121, wherein said information processing apparatus further comprises:

a discrimination step of discriminating whether or not to attach said additional information to said output information;

wherein said determination step is adapted, in case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

132. An information providing method according to clause 121, wherein the output is a monochromatic output.

133. An information providing method according to clause 121, wherein the output is a color output.

134. An information providing method according to clause 121, wherein said additional information is advertisement information to be attached to said output information.

135. An information providing method according to clause 121, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

136. An information providing method according to clause 121, wherein the output is executed by an electrophotographic printer unit.

137. An information providing method according to clause 121, wherein the output is executed by an ink jet printer unit.

138. An information providing method according to clause 121, wherein the output is associated with a charge settling function.

139. An information providing method according to clause 121, wherein the output is associated with a person verifying function.

140. An information providing method according to clause 121, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

141. An information providing method according to clause 121, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

142. An information providing method according to

clause 121, wherein said information processing apparatus is adapted to recognize the status information of said output control apparatus for the purpose of executing the output.

143. An information providing method according to clause 121, wherein said information processing apparatus comprises:

an information transmission step of transmitting said output information, specified by said code information received by said code reception step; and

said output control apparatus comprises an information reception step of receiving said output information specified by said code information transmitted by said code transmission step.

144. An information providing method according to clause 121, wherein said information processing apparatus comprises:

an information transmission step of transmitting said output information, specified by said code information transmitted by said code transmission step, to said output control apparatus; and

said output control apparatus comprises an information reception step of receiving said output information specified by said code information transmitted by said code transmission step.

145. A computer-readable memory medium storing an information processing program, the program comprising:

a readout control step of controlling information readout from a first memory step of storing first value information indicating the value of output information to be outputted and from a second memory step of storing second value information indicating the value of additional information to be added to said output information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

146. A memory medium according to clause 145, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

147. A memory medium according to clause 145, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

148. A memory medium according to clause 145, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

149. A memory medium according to clause 145, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

150. A memory medium according to clause 145, wherein said charge for said output, determined by said determination step, may become zero.

151. A memory medium according to clause 148, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as zero.

152. A memory medium according to clause 148, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as a predetermined amount.

153. A memory medium according to clause 145, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

154. A memory medium according to clause 145, wherein said charge for said output is different for a color output and for a monochromatic output.

155. A memory medium according to clause 145, wherein said information processing program further comprises a discrimination step of discriminating whether or not to attach said additional information to said output information;

wherein said determination step is adapted, in case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

156. A memory medium according to clause 145, wherein the output is a monochromatic output.

157. A memory medium according to clause 145, wherein the output is a color output.

158. A memory medium according to clause 145, wherein said additional information is advertisement information to be attached to said output infor-

mation.

159. A memory medium according to clause 145, wherein said information processing program further comprises an input step of entering code information indicating said output information.

160. A memory medium according to clause 145, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

161. A memory medium according to clause 145, wherein the output is executed by an electrophotographic printer unit.

162. A memory medium according to clause 145, wherein the output is executed by an ink jet printer unit.

163. A memory medium according to clause 145, wherein the output is associated with a charge settling function.

164. A memory medium according to clause 145, wherein the output is associated with a person verifying function.

165. A memory medium according to clause 145, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

166. A memory medium according to clause 145, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

167. A memory medium according to clause 145, wherein said information processing program is based on the presence of an interface with the exterior for acquiring said output information.

168. A memory medium according to clause 145, wherein said information processing program is adapted to recognize status information of an external apparatus for the purpose of output.

169. A computer readable memory medium storing an output control program, the program comprising:

a code input step of entering code information for specifying output information;

a setting input step of entering setting information for the output of said output information;

a transmission step of transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and

a reception step of receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

170. A memory medium according to clause 169, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

171. A memory medium according to clause 169, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

172. A memory medium according to clause 169, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

173. A memory medium according to clause 169, wherein said determined charge for said output is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

174. A memory medium according to clause 169, wherein said determined charge for said output may become zero.

175. A memory medium according to clause 172, wherein, in case said monetary amount after subtraction becomes negative, said charge for said output is determined as zero.

176. A memory medium according to clause 172, wherein, in case said monetary amount after subtraction becomes negative, said charge for said output is determined as a predetermined amount.

177. A memory medium according to clause 169, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

178. A memory medium according to clause 169, wherein said charge for said output is different for a color output and for a monochromatic output.

179. A memory medium according to clause 169, wherein said output control program further comprises an operation process including said code input step and said setting input step.

180. A memory medium according to clause 169, wherein the output is a monochromatic output.

181. A memory medium according to clause 169, wherein the output is a color output.

182. A memory medium according to clause 169, wherein said additional information is advertisement information to be attached to said output information.

183. A memory medium according to clause 169, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.

184. A memory medium according to clause 169,

wherein the output is executed by an electrophotographic printer unit.

185. A memory medium according to clause 169, wherein the output is executed by an ink jet printer unit.

186 A memory medium according to clause169, wherein the output is associated with a charge settling function.

187. A memory medium according to clause 169, wherein the output is associated with a person verifying function.

188. A memory medium according to clause 169, wherein the output is based on the presence of a two-side unit capable of output on the back surface.

189. A memory medium according to clause 169, wherein the output is based on the presence of a coin counter for payment of the charge for said output.

190. A memory medium according to clause 169, wherein said output control program further, comprises an information reception step for receiving the output information specified by said code information transmitted by said transmission step.

191. A memory medium according to clause 169, wherein said apparatus is connected to said external apparatus through a network.

192. A memory medium according to clause 169, wherein said output control program further comprises a status transmission step for transmitting a status to said external apparatus.

193. A computer-readable memory medium storing a program for use in an information providing system composed of an information processing apparatus and an output control apparatus connected through a network:

wherein the program in said information processing apparatus comprises:

a code input step of entering code information for specifying output information; and

a code transmission step of transmitting said code information entered by said code input step; and

the program in said output control apparatus comprises:

a readout control step of controlling information readout from a first memory step storing first value information indicating the value of output information to be outputted and from a second memory step storing second value information indicating the value of additional information to be added to said output information;

a code reception step of receiving said code information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception step and the second value information of said additional information to be added in the output to said output information.

194. A memory medium according to clause 193, wherein said output information is present in plural units and said first value information corresponds to said plural output information.

195. A memory medium according to clause 193, wherein said additional information is present in plural units and said second value information corresponds to said plural additional information.

196. A memory medium according to clause 193, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

197. A memory medium according to clause 193, wherein said charge for said output, determined by said determination step, is based on a monetary amount obtained by subtracting, from a monetary amount for executing the output and a monetary amount corresponding to said first value information, a monetary amount corresponding to said second value information.

198. A memory medium according to clause 193, wherein said charge for said output, determined by said determination step, may become zero.

199. A memory medium according to clause 196, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as zero.

200. A memory medium according to clause 196, wherein, in case said monetary amount after subtraction becomes negative, said determination step is adapted to determine the charge for said output as a predetermined amount.

201. A memory medium according to clause 193, wherein said additional information is so controlled as to be or not to be attached to said output information, based on attribute information indicating the number of output attached to said output information.

202. A memory medium according to clause 193, wherein said charge for said output is different for a color output and for a monochromatic output.

203. A memory medium according to clause 193, wherein the program in said information processing apparatus further comprises:

a discrimination step of discriminating whether or not to attach said additional information to said output information;

wherein said determination step is adapted, in

case said additional information is discriminated as not to be attached to said output information, to determine the charge for said output based on the monetary amount corresponding to said first value information and the monetary amount for executing the output.

204. A memory medium according to clause 193, wherein the output is a monochromatic output.
205. A memory medium according to clause 193, wherein the output is a color output.
206. A memory medium according to clause 193, wherein said additional information is advertisement information to be attached to said output information.
207. A memory medium according to clause 193, wherein said code information is based on information obtained from an equipment other than a computer, such as a mobile terminal.
208. A memory medium according to clause 193, wherein the output is executed by an electrophotographic printer unit.
209. A memory medium according to clause 193, wherein the output is executed by an ink jet printer unit.
210. A memory medium according to clause 193, wherein the output is associated with a charge settling function.
211. A memory medium according to clause 193, wherein the output is associated with a person verifying function.
212. A memory medium according to clause 193, wherein the output is based on the presence of a two-side unit capable of output on the back surface.
213. A memory medium according to clause 193, wherein the output is based on the presence of a coin counter for payment of the charge for said output.
214. A memory medium according to clause 193, wherein said information processing apparatus is adapted to recognize the status information of said output control apparatus for the purpose of executing the output.
215. A memory medium according to clause 193, wherein the program in said information processing apparatus comprises:

an information transmission step of transmitting said output information, specified by said code information received by said code reception step, to said output control apparatus; and
the program in said output control apparatus comprises:
an information reception step of receiving said output information specified by said code information transmitted by said code transmission step.

216. A memory medium according to clause 193, wherein the program in said information processing apparatus comprises:

an information transmission step of transmitting said output information, specified by said code information transmitted by said code transmission step, to said output control apparatus; and

the program in said output control apparatus comprises an information reception step of receiving said output information specified by said code information transmitted by said code transmission step.

217. An information processing apparatus comprising:

input means for entering code information corresponding to output information;
output information acquisition means for acquiring said output information corresponding to said code information entered by said input means;
additional information acquisition means for acquiring additional information to be outputted together with said output information; and
output control means for controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

218. An information processing apparatus according to clause 217, wherein said output control means is adapted to control the output unit so as to output said output information on the front surface and said additional information on the back surface.
219. An information processing apparatus according to clause 218, wherein said output control means is adapted to control the output unit so as to output said additional information on the front and back surfaces.
220. An information processing apparatus according to clause 217, wherein said output control means is adapted to control the output unit so as to output said additional information on a sheet separate from that for said output information.
221. An information processing apparatus according to clause 217, wherein said output control means is adapted to control the output unit so as to output said additional information on a combination of the front surface, back surface and another sheet.
222. An information processing apparatus according to clause 217, further comprising input means for entering said output surface information.

223. An information processing apparatus according to clause 222, wherein said input means can enter that the output surface information is the back surface.

224. An information processing apparatus according to clause 222, wherein said input means can enter that the output surface information is another sheet.

225. An information processing apparatus according to clause 222, wherein said input means can enter that the output surface information is a combination of the front surface, back surface and another sheet.

226. An information processing apparatus according to clause 217, further comprising reception means for receiving said output surface information from an external apparatus.

227. An information processing apparatus according to clause 217, wherein said output control means is adapted not to output said additional information according to the attribute of said output information.

228. An information processing apparatus according to clause 217, wherein said output control means is adapted not to output said additional information according to the user information.

229. An information processing apparatus according to clause 217, wherein said output unit is an electrophotographic printer unit.

230. An information processing apparatus according to clause 217, wherein said output unit is an ink jet printer unit.

231. An information processing apparatus according to clause 217, wherein said output is a monochromatic output.

232. An information processing apparatus according to clause 217, wherein said output is a color output.

233. An information processing apparatus according to clause 217, wherein said output unit is provided with a two-side unit.

234. An information processing apparatus according to clause 217, further comprising a charge settling function apparatus.

235. An information processing apparatus according to clause 217, further comprising a UI unit for entering code information.

236. An information processing apparatus according to clause 217, wherein said additional information is advertisement information.

237. An information processing apparatus according to clause 217, wherein said output information is mail information.

238. An information processing apparatus comprising:

reception means for receiving code information corresponding to output information from an external apparatus;

output information acquisition means for acquiring said output information corresponding to said code information received by said reception means;

additional information acquisition means for acquiring additional information to be outputted together with said output information;

generation means for generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

transmission means for transmitting said output information generated by said generation means to said external apparatus.

239. An information processing apparatus according to clause 238, wherein said generation means is adapted to generate said output information so as to output said output information on the front surface and said additional information on the back surface.

240. An information processing apparatus according to clause 239, wherein said generation means is adapted to generate said output information so as to output said additional information on the front and back surfaces.

241. An information processing apparatus according to clause 238, wherein said generation means is adapted to generate said output information so as to output said additional information on a sheet separate from that for said output information.

242. An information processing apparatus according to clause 238, wherein said generation means is adapted to generate said output information so as to output said additional information on a combination of the front surface, back surface and another sheet.

243. An information processing apparatus according to clause 238, wherein said additional information is advertisement information.

244. An information processing apparatus according to clause 238, wherein said information processing apparatus is a server apparatus.

245. An information processing apparatus according to clause 238, which comprises being connected to said external apparatus through a network.

246. An information processing apparatus according to clause 238, further comprising storage means for storing said output information and said additional information.

247. An information processing apparatus according to clause 238, wherein said output information is mail information.

248. An information processing apparatus comprising:

acquisition means for acquiring plural output information corresponding to entered code information;

first instruction receiving means for receiving an instruction for outputting all said output information acquired by said acquisition means; and

second instruction receiving means for receiving an instruction for outputting only a part among said plural output information acquired by said acquisition means.

249. An information processing apparatus according to clause 248, further comprising:

output control means for controlling an output unit so as to output all said output information acquired by said acquisition means, according to the instruction received by said first instruction receiving means.

250. An information processing apparatus according to clause 248, wherein said output unit is an electrophotographic printer unit.

251. An information processing apparatus according to clause 248, wherein said output unit is an ink jet printer unit.

252. An information processing apparatus according to clause 248, wherein said output unit is provided with a two-side unit.

253. An information processing apparatus according to clause 248, wherein said output is a monochromatic output.

254. An information processing apparatus according to clause 248, wherein said output is a color output.

255. An information processing apparatus according to clause 248, further comprising a charge settling function apparatus.

256. An information processing apparatus according to clause 248, further comprising a UI unit for entering code information.

257. An information processing apparatus according to clause 248, wherein said output information is mail information.

258. An information processing apparatus comprising:

selection means for selecting the charge settling method for an information output; and

output control means for controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection means is cash payment.

259. An information processing apparatus according to clause 258, wherein said symbol indicating the amount of said charge is a bar code.

260. An information processing apparatus according to clause 258, wherein the amount of said charge is variable according to additional information attached to said information.

261. An information processing apparatus according to clause 258, wherein said charge is variable according to the output format of said information.

262. An information processing apparatus according to clause 261, wherein said output format includes a color output or a monochromatic output.

263. An information processing apparatus according to clause 258, further comprising:

input means for entering code information correlated with said information;

wherein said output control means is adapted to control an output unit so as to output said information corresponding to said code information entered by said input means.

264. An information processing apparatus according to clause 258, further comprising reception means for receiving the amount of said charge from an external apparatus.

265. An information processing apparatus according to clause 258, wherein said output unit is an electrophotographic printer unit.

266. An information processing apparatus according to clause 258, wherein said output unit is an ink jet printer unit.

267. An information processing apparatus according to clause 258, wherein said output is a monochromatic output.

268. An information processing apparatus according to clause 258, wherein said output is a color output.

269. An information processing apparatus according to clause 258, wherein said output unit is provided with a two-side unit.

270. An information processing apparatus according to clause 258, further comprising a charge settling function apparatus.

271. An information processing apparatus according to clause 258, further comprising a UI unit for entering code information.

272. An information processing apparatus according to clause 258, wherein said output information is mail information.

273. An information processing method comprising:

an input step of entering code information corresponding to output information;

an output information acquisition step of acquiring said output information corresponding to said code information entered by said input step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information; and

an output control step of controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

274. An information processing method according to clause 273, wherein said output control step is adapted to control the output unit so as to output said output information on the front surface and said additional information on the back surface.

275. An information processing method according to clause 274, wherein said output control step is adapted to control the output unit so as to output said additional information on the front and back surface.

276. An information processing method according to clause 273, wherein said output control step is adapted to control the output unit so as to output said additional information on a sheet separate from that for said output information.

277. An information processing method according to clause 273, wherein said output control step is adapted to control the output unit so as to output said additional information on a combination of the front surface, back surface and another sheet.

278. An information processing method according to clause 273, further comprising an input step of entering said output surface information.

279. An information processing method according to clause 278, wherein said input step can enter that the output surface information is the back surface.

280. An information processing method according to clause 278, wherein said input step can enter that the output surface information is another sheet.

281. An information processing method according to clause 278, wherein said input step can enter that the output surface information is a combination of the front surface, back surface and another sheet.

282. An information processing method according to clause 273, further comprising a reception step of receiving said output surface information from an external apparatus.

283. An information processing method according to clause 273, wherein said output control step is adapted not to output said additional information according to the attribute of said output information.

284. An information processing method according to clause 273, wherein said output control step is adapted not to output said additional information according to the user information.

285. An information processing method according to clause 273, wherein said output unit is an electrophotographic printer unit.

286. An information processing method according to clause 273, wherein said output unit is an ink jet printer unit.

287. An information processing method according to clause 273, wherein said output is a monochromatic output.

288. An information processing method according to clause 273, wherein said output is a color output.

289. An information processing method according to clause 273, wherein said output unit is provided with a two-side unit.

290. An information processing method according to clause 273, further comprising a charge settling process.

291. An information processing method according to clause 273, further comprising a UI process for entering code information.

292. An information processing method according to clause 273, wherein said additional information is advertisement information.

293. An information processing method according to clause 273, wherein said output information is mail information.

294. An information processing method comprising:

a reception step of receiving code information corresponding to output information from an external apparatus;

an output information acquisition step of acquiring said output information corresponding to said code information received by said reception step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information;

a generation step of generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

a transmission step of transmitting said output information generated by said generation step to said external apparatus.

295. An information processing method according to clause 294, wherein said generation step is adapted to generate said output information so as to output said output information on the front surface and said additional information on the back surface.

296. An information processing method according to clause 295, wherein said generation step is adapted to generate said output information so as to output said additional information on the front and back surfaces.

297. An information processing method according to clause 294, wherein said generation step is

adapted to generate said output information so as to output said additional information on a sheet separate from that for said output information.

298. An information processing method according to clause 294, wherein said generation step is adapted to generate said output information so as to output said additional information on a combination of the front surface, back surface and another sheet.

299. An information processing method according to clause 294, wherein said additional information is advertisement information.

300. An information processing method according to clause 294, wherein said information processing method is executed by a server apparatus.

301. An information processing method according to clause 294, which comprises being connected to said external apparatus through a network.

302. An information processing method according to clause 294, further comprising a storage step of storing said output information and said additional information.

303. An information processing method according to clause 290, wherein said output information is mail information.

304. An information processing method comprising:

an acquisition step of acquiring plural output information corresponding to entered code information;
a first instruction receiving step of receiving an instruction for outputting all said output information acquired by said acquisition step; and
a second instruction receiving step of receiving an instruction for outputting only a part among said plural output information acquired by said acquisition step.

305. An information processing method according to clause 304, further comprising:

an output control step of controlling an output unit so as to output all said output information acquired by said acquisition step, according to the instruction received by said first instruction receiving step.

306. An information processing method according to clause 304, wherein said output unit is an electrophotographic printer unit.

307. An information processing method according to clause 304, wherein said output unit is an ink jet printer unit.

308. An information processing method according to clause 304, wherein said output unit is provided with a two-side unit.

309. An information processing method according to clause 304, wherein said output is a monochromatic output.

310. An information processing method according to clause 304, wherein said output is a color output.

311. An information processing method according to clause 304, further comprising a charge settling process.

312. An information processing method according to clause 304, further comprising a UI process for entering code information.

313. An information processing method according to clause304, wherein said output information is mail information.

314. An information processing method comprising:

a selection step of selecting the charge settling method for an information output; and
an output control step of controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection step is cash payment.

315. An information processing method according to clause 314, wherein said symbol indicating the amount of said charge is a bar code.

316. An information processing method according to clause 314, wherein the amount of said charge is variable according to additional information attached to said information.

317. An information processing method according to clause 314, wherein said charge is variable according to the output format of said information.

318. An information processing method according to clause 317, wherein said output format includes a color output or a monochromatic output.

319. An information processing method according to clause 314, further comprising:

an input step of entering code information correlated with said information;
wherein said output control step is adapted to control an output unit so as to output said information corresponding to said code information entered by said input step.

320. An information processing method according to clause 314, further comprising a reception step of receiving the amount of said charge from an external apparatus.

321. An information processing method according to clause 314, wherein said output unit is an electrophotographic printer unit.

322. An information processing method according to clause 314, wherein said output unit is an ink jet printer unit.

323. An information processing method according to clause 314, wherein said output is a monochro-

matic output.

324. An information processing method according to clause 314, wherein said output is a color output.

325. An information processing method according to clause 314, wherein said output unit is provided with a two-side unit.

326. An information processing method according to clause 314, further comprising a charge settling process.

327. An information processing method according to clause 314, further comprising a UI process for entering code information.

328. An information processing method according to clause 314, wherein said output information is mail information.

329. A computer-readable memory medium storing an information processing program, the program comprising:

an input step of entering code information corresponding to output information;
an output information acquisition step of acquiring said output information corresponding to said code information entered by said input step;
an additional information acquisition step of acquiring additional information to be outputted together with said output information; and
an output control step of controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

330. A memory medium according to clause 329, wherein said output control step is adapted to control the output unit so as to output said output information on the front surface and said additional information on the back surface.

331. A memory medium according to clause 330, wherein said output control step is adapted to control the output unit so as to output said additional information on the front and back surfaces.

332. A memory medium according to clause 329, wherein said output control step is adapted to control the output unit so as to output said additional information on a sheet separate from that for said output information.

333. A memory medium according to clause 329, wherein said output control step is adapted to control the output unit so as to output said additional information on a combination of the front surface, back surface and another sheet.

334. A memory medium according to clause 329, wherein said information processing program further comprises an input step of entering said output surface information.

335. A memory medium according to clause 334, wherein said input step can enter that the output surface information is the back surface.

336. A memory medium according to clause 334, wherein said input step can enter that the output surface information is another sheet.

337. A memory medium according to clause 334, wherein said input step can enter that the output surface information is a combination of the front surface, back surface and another sheet.

338. A memory medium according to clause 329, wherein said information processing program further comprises a reception step of receiving said output surface information from an external apparatus.

339. A memory medium according to clause 329, wherein said output control step is adapted not to output said additional information according to the attribute of said output information.

340. A memory medium according to clause 329, wherein said output control step is adapted not to output said additional information according to the user information.

341. A memory medium according to clause 329, wherein said output unit is an electrophotographic printer unit.

342. A memory medium according to clause 329, wherein said output unit is an ink jet printer unit.

343. A memory medium according to clause 329, wherein said output is a monochromatic output.

344. A memory medium according to clause 329, wherein said output is a color output.

345. A memory medium according to clause 329, wherein said output unit is provided with a two-side unit.

346. A memory medium according to clause 329, wherein said information processing program further comprises a charge settling process.

347. A memory medium according to clause 329, wherein said information processing program further comprises a UI process for entering code information.

348. A memory medium according to clause 329, wherein said additional information is advertisement information.

349. A memory medium according to clause 329, wherein said output information is mail information.

350. A computer-readable memory medium storing an information processing program, the program comprising:

a reception step of receiving code information corresponding to output information from an external apparatus;
an output information acquisition step of acquiring said output information corresponding to said code information received by said reception step;
an additional information acquisition step of

acquiring additional information to be outputted together with said output information;

a generation step of generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

a transmission step of transmitting said output information generated by said generation step to said external apparatus.

351. A memory medium according to clause 350, wherein said generation step is adapted to generate said output information so as to output said output information on the front surface and said additional information on the back surface.

352. A memory medium according to clause 351, wherein said generation step is adapted to generate said output information so as to output said additional information on the front sand back surface.

353. A memory medium according to clause 350, wherein said generation step is adapted to generate said output information so as to output said additional information on a sheet separate from that for said output information.

354. A memory medium according to clause 350, wherein said generation step is adapted to generate said output information so as to output said additional information on a combination of the front surface, back surface and another sheet.

355. A memory medium according to clause 350, wherein said additional information is advertisement information.

356. A memory medium according to clause 350, wherein said information processing method is executed by a server apparatus.

357. A memory medium according to clause 350, which comprises being connected to said external apparatus through a network.

358. A memory medium according to clause 350, wherein said information processing program further comprises a storage step of storing said output information and said additional information.

359. A memory medium according to clause 290, wherein said output information is mail information.

360. A computer-readable memory medium storing an information processing program, the program comprising:

an acquisition step of acquiring plural output information corresponding to entered code information;

a first instruction receiving step of receiving an instruction for outputting all said output information acquired by said acquisition step; and

a second instruction receiving step of receiving an instruction for outputting only a part among said plural output information acquired by said acquisition step.

361. A memory medium according to clause 360, wherein said information processing program further comprises:

an output control step of controlling an output unit so as to output all said output information acquired by said acquisition step, according to the instruction received by said first instruction receiving step.

362. A memory medium according to clause 360, wherein said output unit is an electrophotographic printer unit.

363. A memory medium according to clause 360, wherein said output unit is an ink jet printer unit.

364. A memory medium according to clause 360, wherein said output unit is provided with a two-side unit.

365. A memory medium according to clause 360, wherein said output is a monochromatic output.

366. A memory medium according to clause 360, wherein said output is a color output.

367. A memory medium according to clause 360, wherein said information processing program further comprises a charge settling process.

368. A memory medium according to clause 360, wherein said information processing program further comprises a UI process for entering code information.

369. A memory medium according to clause 360, wherein said output information is mail information.

370. A computer-readable memory medium storing an information processing program, the program comprising:

a selection step of selecting the charge settling method for an information output; and

an output control step of controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection step is cash payment.

371. A memory medium according to clause 370, wherein said symbol indicating the amount of said charge is a bar code.

372. A memory medium according to clause 370, wherein the amount of said charge is variable according to additional information attached to said information.

373. A memory medium according to clause 370, wherein said charge is variable according to the output format of said information.

374. A memory medium according to clause 373,

wherein said output format includes a color output or a monochromatic output.

375. A memory medium according to clause 370, wherein said information processing program further comprises:

an input step of entering code information correlated with said information;
wherein said output control step is adapted to control an output unit so as to output said information corresponding to said code information entered by said input step.

376. A memory medium according to clause 370, wherein said information processing program further comprises a reception step of receiving the amount of said charge from an external apparatus.

377. A memory medium according to clause 370, wherein said output unit is an electrophotographic printer unit.

378. A memory medium according to clause 370, wherein said output unit is an ink jet printer unit.

379. A memory medium according to clause 370, wherein said output is a monochromatic output.

380. A memory medium according to clause 370, wherein said output is a color output.

381. A memory medium according to clause 370, wherein said output unit is provided with a two-side unit.

382. A memory medium according to clause 370, wherein said information processing program further comprises a charge settling process.

383. A memory medium according to clause 370, wherein said information processing program further comprises a UI process for entering code information.

384. A memory medium according to clause 370, wherein said output information is mail information.

Claims

1. An information processing apparatus comprising:

readout control means for controlling information readout from first memory means storing first value information indicating the value of output information to be outputted and from second memory means storing second value information indicating the value of additional information to be added to said output information; and
determination means for determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

2. An output control apparatus comprising:

code input means for entering code information for specifying output information;
setting input means for entering setting information for the output of said output information;
transmission means for transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and
reception means for receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

3. An information providing system composed of an information processing apparatus and an output control apparatus connected through a network:
wherein said information processing apparatus comprising:

code input means for entering code information for specifying output information; and
code transmission means for transmitting said code information entered by said code input means; and
said output control apparatus comprises:
readout control means for controlling information readout from first memory means storing first value information indicating the value of output information to be outputted and from second memory means storing second value information indicating the value of additional information to be added to said output information;
code reception means for receiving said code information; and
determination means for determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception means and the second value information of said additional information to be added in the output to said output information.

4. An information processing method comprising:

a readout control step of controlling information readout from a first memory step of storing first value information indicating the value of output

information to be outputted and from a second memory step of storing second value information indicating the value of additional information to be added to said output information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

5. An output control method comprising:

a code input step of entering code information for specifying output information;

a setting input step of entering setting information for the output of said output information;

a transmission step of transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and

a reception step of receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

6. An information providing method for use in an information providing system composed of an information processing apparatus and an output control apparatus connected through a network:

wherein said information processing apparatus comprises:

a code input step of entering code information for specifying output information; and

a code transmission step of transmitting said code information entered by said code input step; and

said output control apparatus comprises:

a readout control step of controlling information readout from a first memory step storing first value information indicating the value of output information to be outputted and from a second memory step storing second value information indicating the value of additional information to be added to said output information;

a code reception step of receiving said code information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception step and the second value information of said additional information to be added in the output to said output information.

7. A computer-readable memory medium storing an information processing program, the program comprising:

a readout control step of controlling information readout from a first memory step of storing first value information indicating the value of output information to be outputted and from a second memory step of storing second value information indicating the value of additional information to be added to said output information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information and the second value information of said additional information to be added to said output information.

8. A computer readable memory medium storing an output control program, the program comprising:

a code input step of entering code information for specifying output information;

a setting input step of entering setting information for the output of said output information;

a transmission step of transmitting said code information entered by said code input means and said setting information entered by said setting input means to an external apparatus; and

a reception step of receiving, from said external apparatus, charge information indicating the charge of the output, determined by said external apparatus based on first value information indicating the value of said output information specified by the code information transmitted by said transmission means and on second value information indicating the value of additional information to be added in the output to said output information.

9. A computer-readable memory medium storing a program for use in an information providing system composed of an information processing apparatus and an output control apparatus connected through a network;

wherein the program in said information processing apparatus comprises:

a code input step of entering code information

for specifying output information; and

a code transmission step of transmitting said code information entered by said code input step; and

the program in said output control apparatus comprises:

a readout control step of controlling information readout from a first memory step storing first value information indicating the value of output information to be outputted and from a second memory step storing second value information indicating the value of additional information to be added to said output information;

a code reception step of receiving said code information; and

a determination step of determining a charge for the output of said output information and said additional information, based on the first value information of said output information specified by the code information received by said reception step and the second value information of said additional information to be added in the output to said output information.

10. An information processing apparatus comprising:

input means for entering code information corresponding to output information;

output information acquisition means for acquiring said output information corresponding to said code information entered by said input means;

additional information acquisition means for acquiring additional information to be outputted together with said output information; and

output control means for controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

11. An information processing apparatus comprising:

reception means for receiving code information corresponding to output information from an external apparatus;

output information acquisition means for acquiring said output information corresponding to said code information received by said reception means;

additional information acquisition means for acquiring additional information to be outputted together with said output information;

generation means for generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

transmission means for transmitting said output information generated by said generation means to said external apparatus.

12. An information processing apparatus comprising:

acquisition means for acquiring plural output information corresponding to entered code information;

first instruction receiving means for receiving an instruction for outputting all said output information acquired by said acquisition means; and

second instruction receiving means for receiving an instruction for outputting only a part among said plural output information acquired by said acquisition means.

13. An information processing apparatus comprising:

selection means for selecting the charge settling method for an information output; and

output control means for controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection means is cash payment.

14. An information processing method comprising:

an input step of entering code information corresponding to output information;

an output information acquisition step of acquiring said output information corresponding to said code information entered by said input step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information; and

an output control step of controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

15. An information processing method comprising:

a reception step of receiving code information corresponding to output information from an external apparatus;

an output information acquisition step of acquiring said output information corresponding to said code information received by said reception step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information;

a generation step of generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

a transmission step of transmitting said output information generated by said generation step to said external apparatus.

16. An information processing method comprising:

an acquisition step of acquiring plural output information corresponding to entered code information;

a first instruction receiving step of receiving an instruction for outputting all said output information acquired by said acquisition step; and

a second instruction receiving step of receiving an instruction for outputting only a part among said plural output information acquired by said acquisition step.

17. An information processing method comprising:

a selection step of selecting the charge settling method for an information output; and

an output control step of controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection step is cash payment.

18. A computer-readable memory medium storing an information processing program, the program comprising:

an input step of entering code information corresponding to output information;

an output information acquisition step of acquiring said output information corresponding to said code information entered by said input step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information; and

an output control step of controlling an output unit in such a manner as to output said output information and said additional information, based on output surface information of said additional information.

19. A computer-readable memory medium storing an information processing program, the program comprising:

a reception step of receiving code information corresponding to output information from an external apparatus;

an output information acquisition step of acquiring said output information corresponding to said code information received by said reception step;

an additional information acquisition step of acquiring additional information to be outputted together with said output information;

a generation step of generating output information in such a manner as to output said output information and said additional information, based on output surface information of said additional information; and

a transmission step of transmitting said output information generated by said generation step to said external apparatus.

20. A computer-readable memory medium storing an information processing program, the program comprising:

an acquisition step of acquiring plural output information corresponding to entered code information;

a first instruction receiving step of receiving an instruction for outputting all said output information acquired by said acquisition step; and

a second instruction receiving step of receiving an instruction for outputting only a part among said plural output information acquired by said acquisition step.

21. A computer-readable memory medium storing an information processing program, the program comprising:

a selection step of selecting the charge settling method for an information output; and

an output control step of controlling an output unit so as to output, together with said information, a symbol indicating the amount of charge for said information output, in case the charge settling method selected by said selection step is cash payment.

22. An information providing system comprising:

means for distributing access codes associated with information to be provided from a control centre; and

a plurality of information outlets served by the control centre via a network;

wherein the information outlets are responsive to receiving user input of access codes to request information from the control centre and output the information in printed form to the user.

FIG. 1

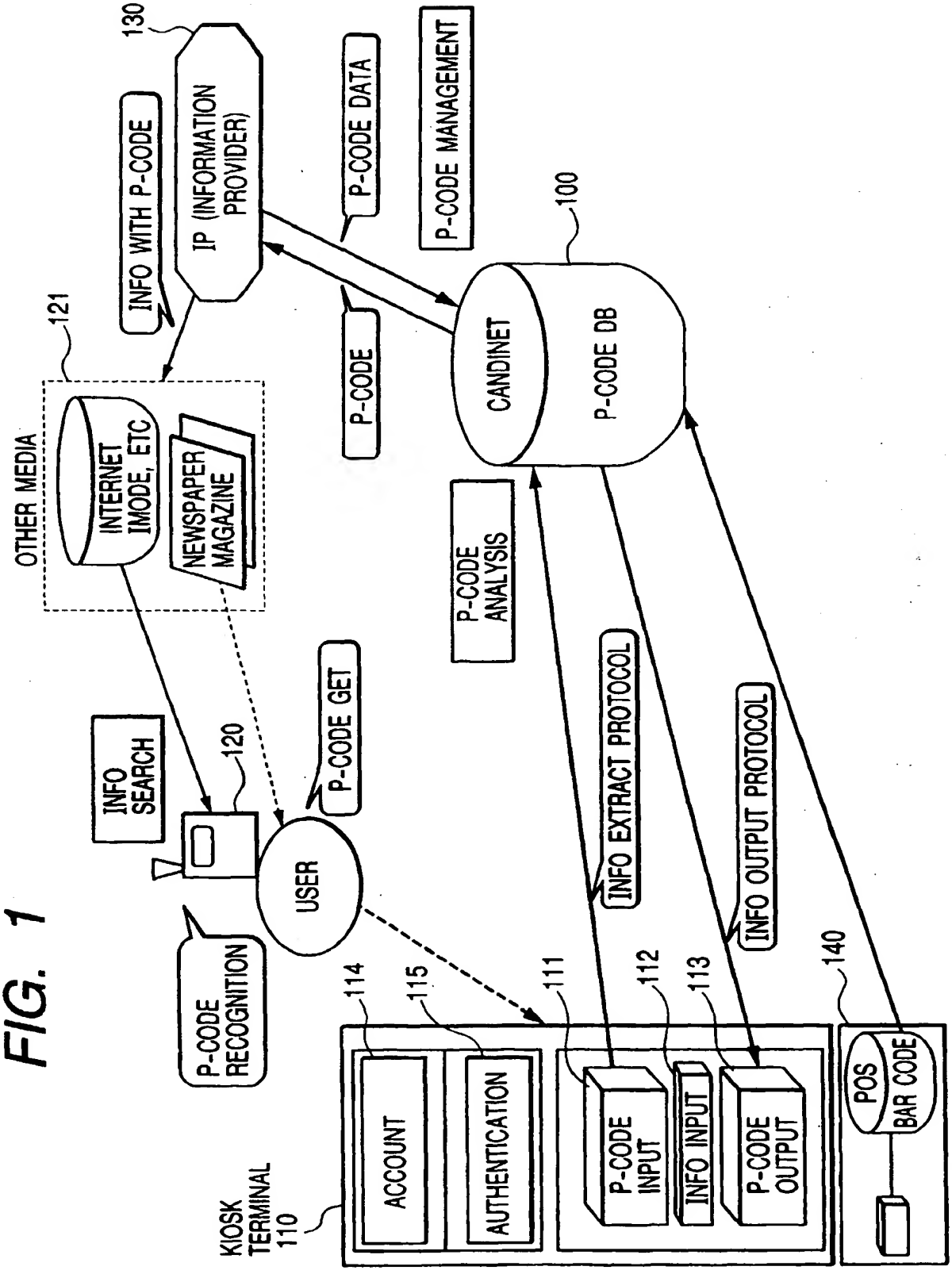
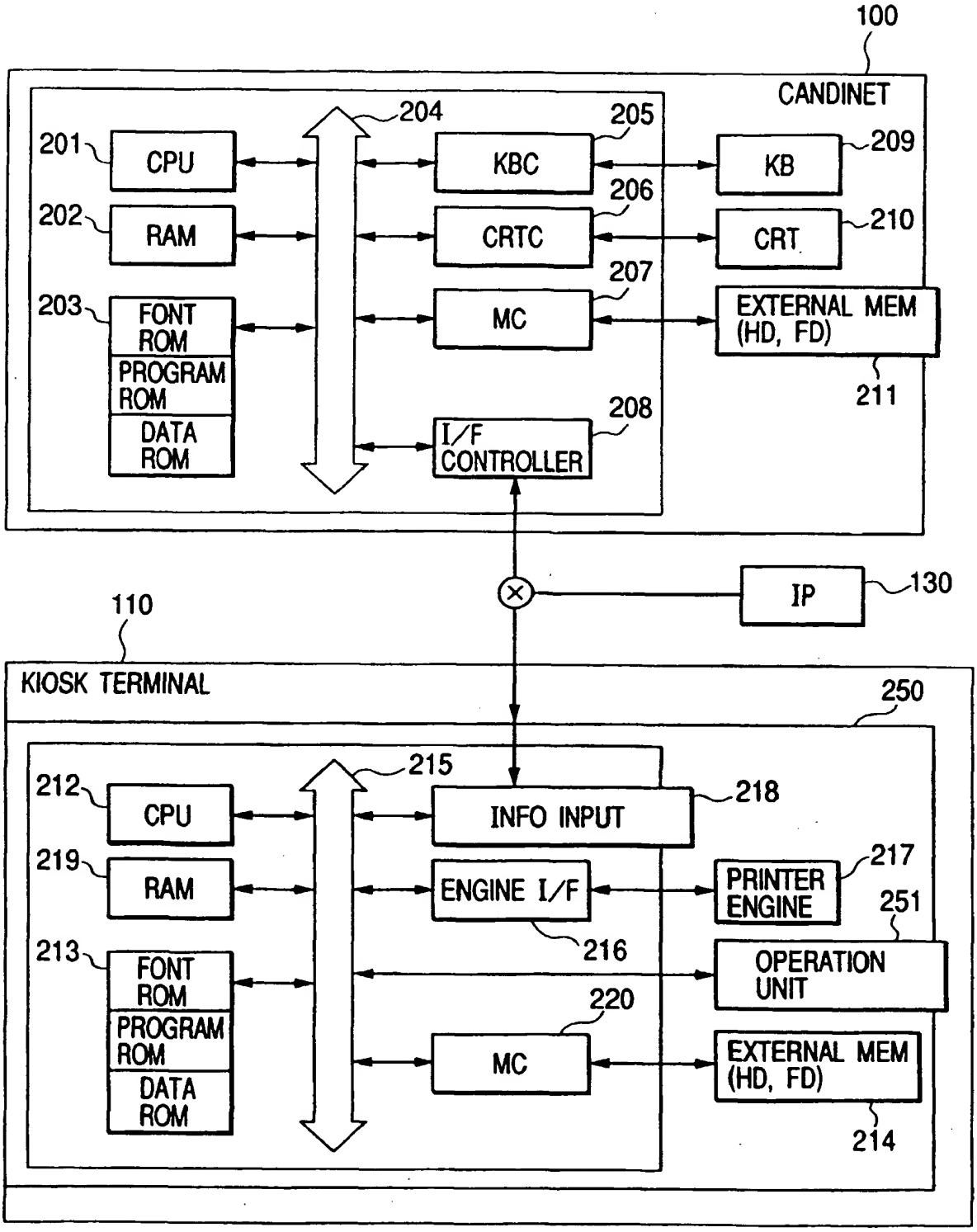

130
IP (INFORMATION PROVIDER)
INFO WITH P-CODE
P-CODE DATA
P-CODE MANAGEMENT
121
OTHER MEDIA
INTERNET IMODE, ETC
NEWSPAPER MAGAZINE
P-CODE
CANDINET
P-CODE DB
100
P-CODE ANALYSIS
INFO SEARCH
120
P-CODE GET
USER
INFO EXTRACT PROTOCOL
INFO OUTPUT PROTOCOL
P-CODE RECOGNITION
114
115
111
112
113
140
KIOSK TERMINAL 110
ACCOUNT
AUTHENTICATION
P-CODE INPUT
INFO INPUT
P-CODE OUTPUT
POS
BAR CODE

FIG. 2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RAM
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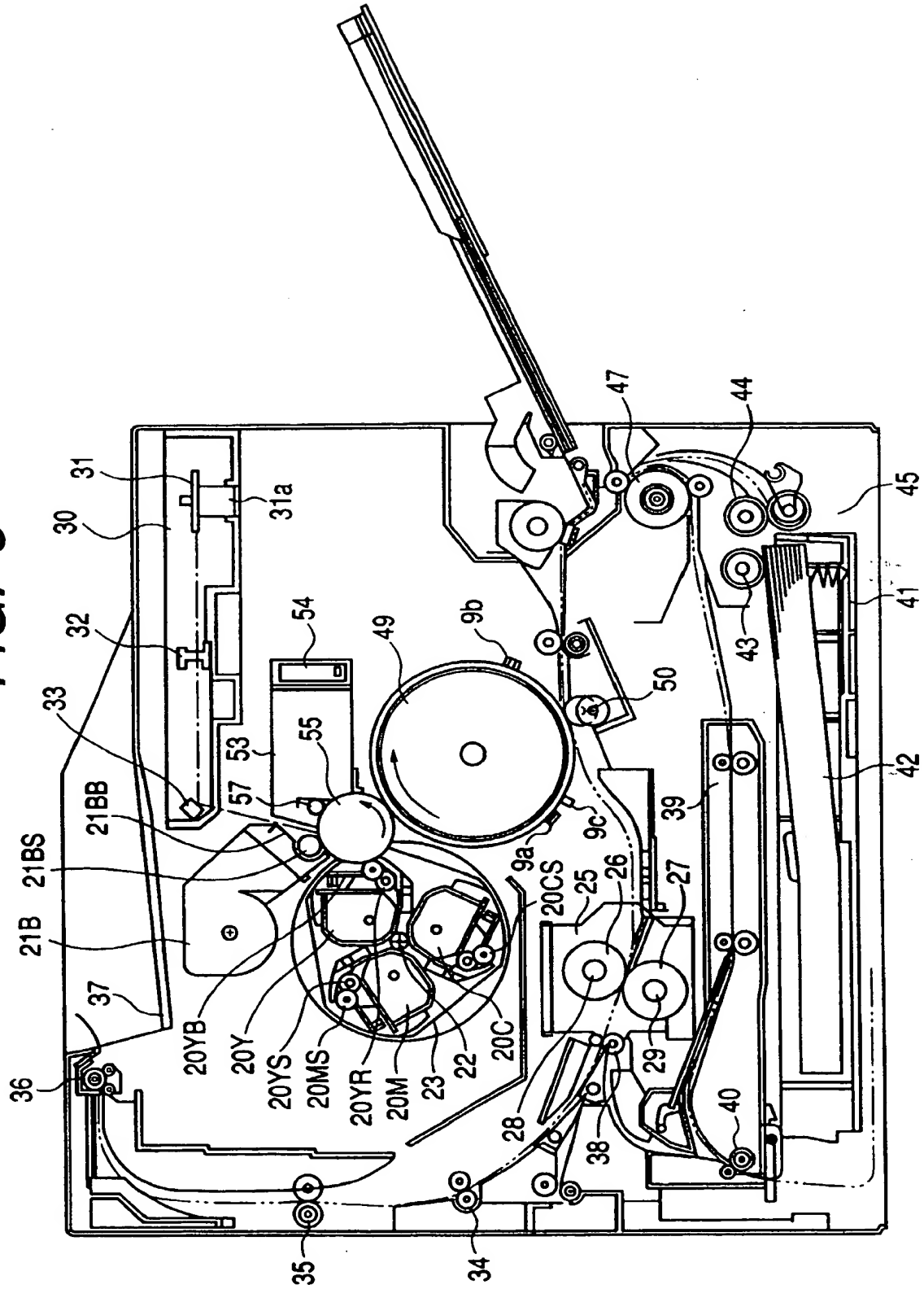
DATA ROM
204
205
KBC
206
CRTC
207
MC
208
I/F CONTROLLER
209
KB
210
CRT
EXTERNAL MEM (HD, FD)
211
IP
130
110
KIOSK TERMINAL
250
212
CPU
219
RAM
213
FONT ROM
PROGRAM ROM
DATA ROM
215
INFO INPUT
218
ENGINE I/F
216
PRINTER ENGINE
217
251
OPERATION UNIT
220
MC
EXTERNAL MEM (HD, FD)
214

FIG. 3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9b
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42
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21BS
21B
9c
9a
20CS
25
26
27
37
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20MS
20YR
20M
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20C
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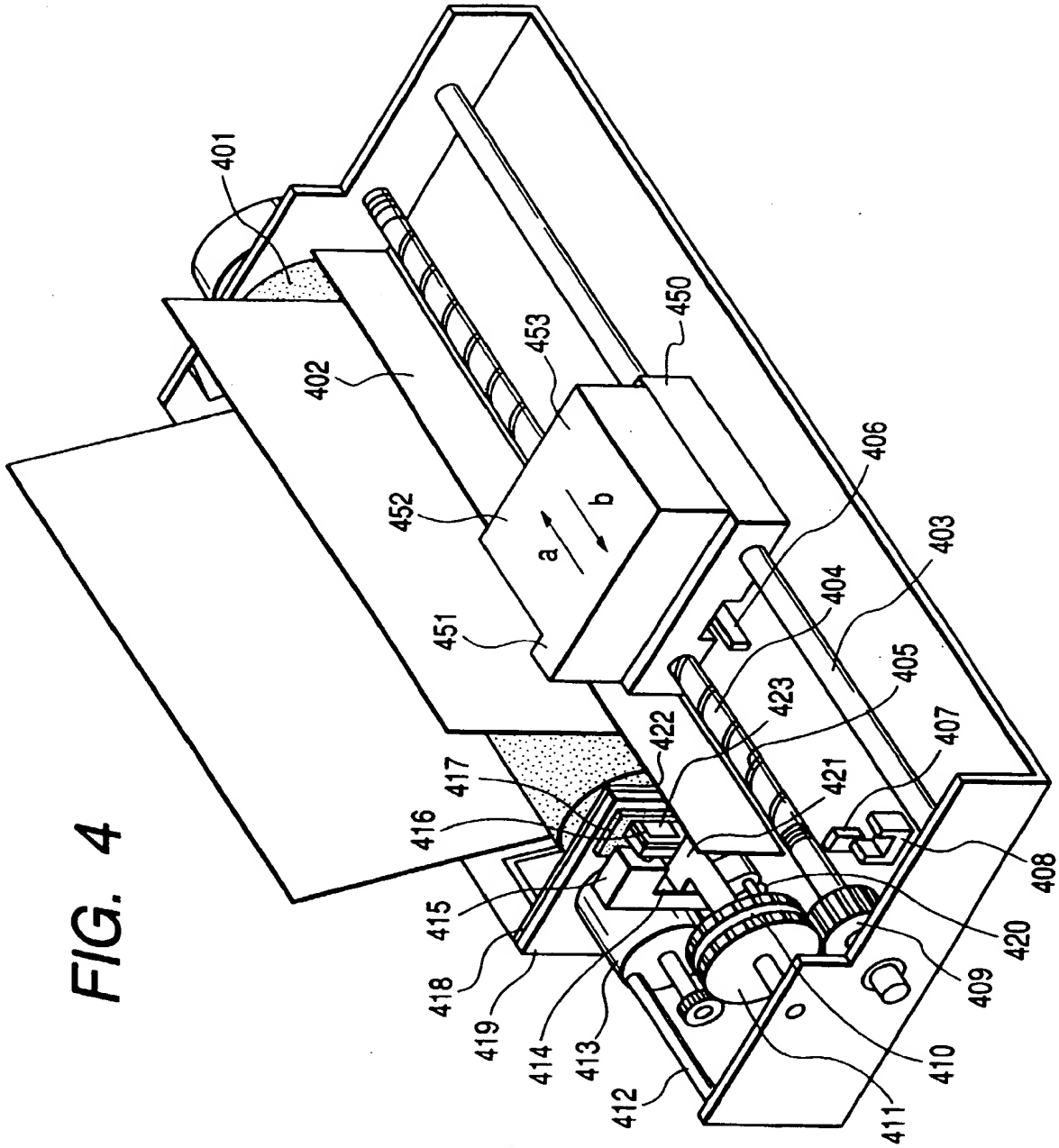
40
35
34

FIG. 4


401
402
450
453
452
a
b
451
406
403
404
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423
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412
411

FIG. 5

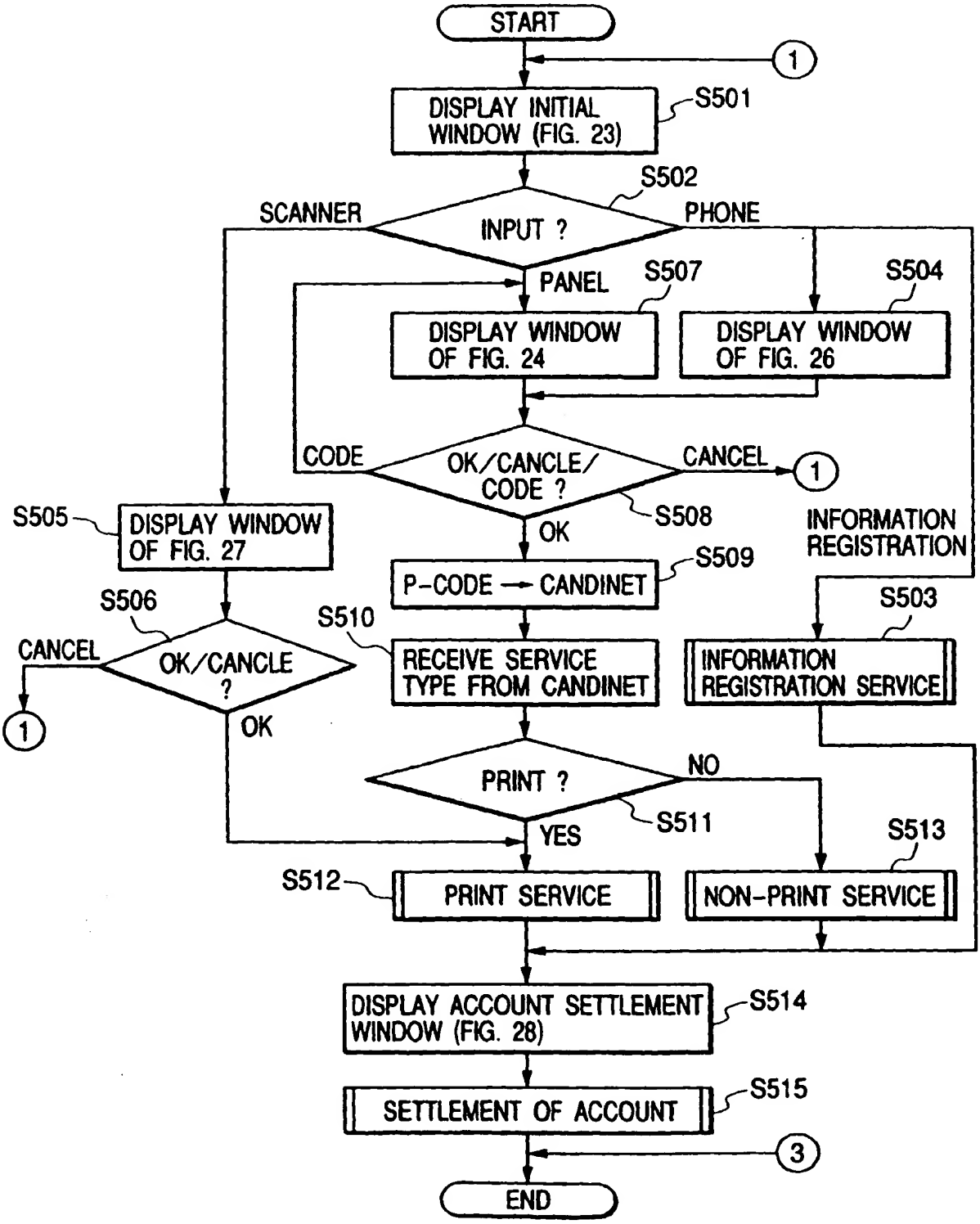

START
1
DISPLAY INITIAL WINDOW (FIG. 23)
S501
S502
SCANNER
INPUT ?
PHONE
PANEL
S507
S504
DISPLAY WINDOW OF FIG. 24
DISPLAY WINDOW OF FIG. 26
CODE
OK/CANCLE/ CODE ?
CANCEL
1
S508
S505
DISPLAY WINDOW OF FIG. 27
OK
INFORMATION REGISTRATION
S509
P-CODE → CANDINET
S506
S510
S503
CANCEL
OK/CANCLE ?
RECEIVE SERVICE TYPE FROM CANDINET
INFORMATION REGISTRATION SERVICE
1
OK
PRINT ?
NO
S511
YES
S513
S512
PRINT SERVICE
NON-PRINT SERVICE
DISPLAY ACCOUNT SETTLEMENT WINDOW (FIG. 28)
S514
SETTLEMENT OF ACCOUNT
S515
3
END

FIG. 6

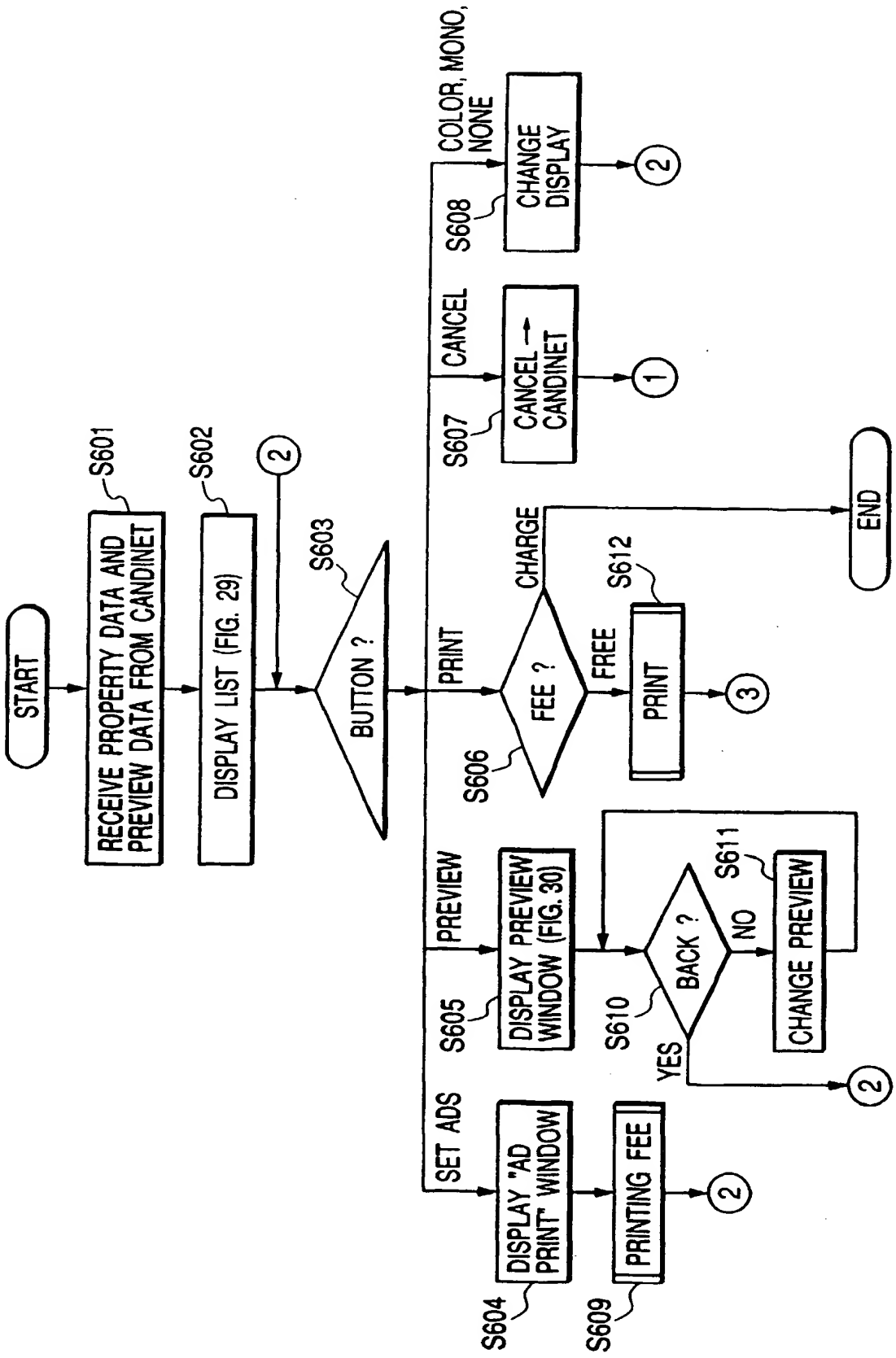

START
S601
RECEIVE PROPERTY DATA AND PREVIEW DATA FROM CANDINET
S602
DISPLAY LIST (FIG. 29)
2
S603
BUTTON ?
PRINT
CHARGE
FREE
S606
FEE ?
S612
PRINT
3
END
CANCEL
S607
CANCEL → CANDINET
1
COLOR, MONO, NONE
S608
CHANGE DISPLAY
2
PREVIEW
S605
DISPLAY PREVIEW WINDOW (FIG. 30)
S610
BACK ?
NO
S611
CHANGE PREVIEW
YES
2
SET ADS
S604
DISPLAY "AD PRINT" WINDOW
S609
PRINTING FEE
2

FIG. 7

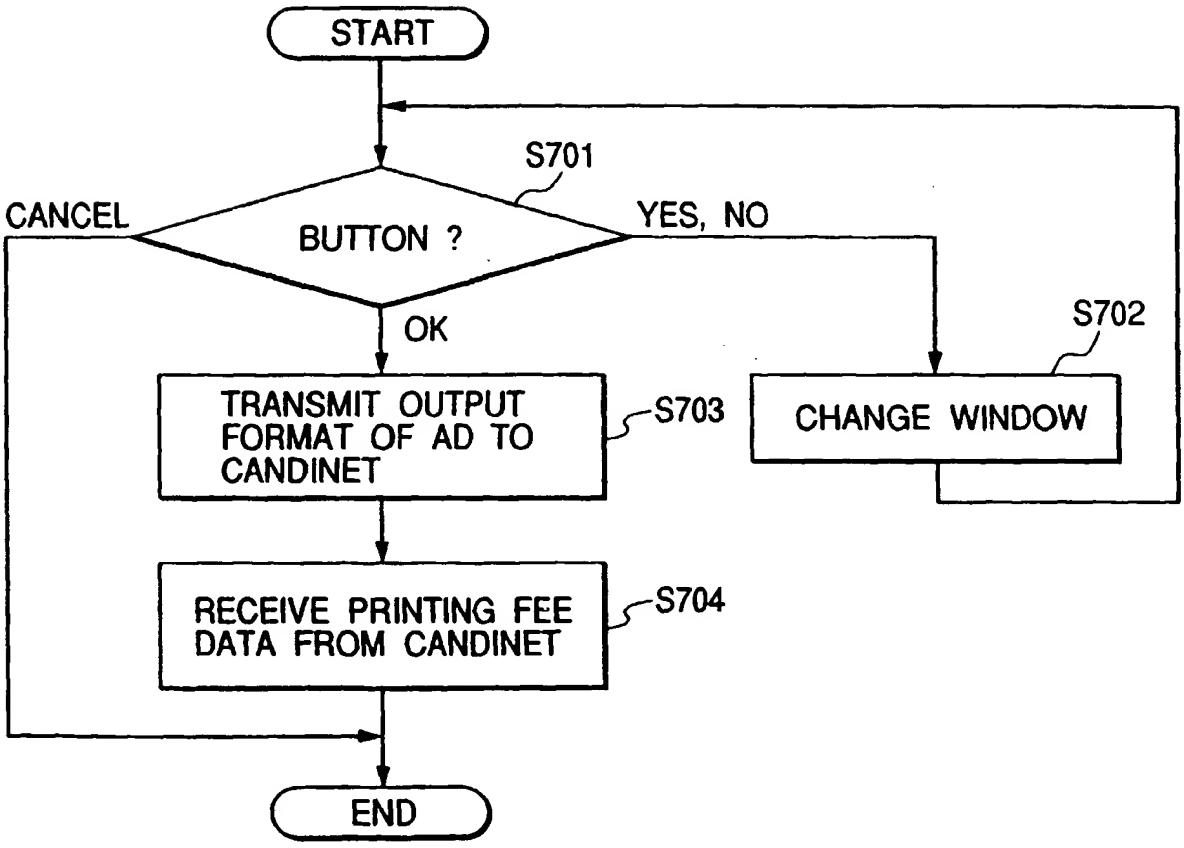

START
S701
BUTTON ?
CANCEL
YES, NO
OK
S702
TRANSMIT OUTPUT FORMAT OF AD TO CANDINET
S703
CHANGE WINDOW
RECEIVE PRINTING FEE DATA FROM CANDINET
S704
END

FIG. 8

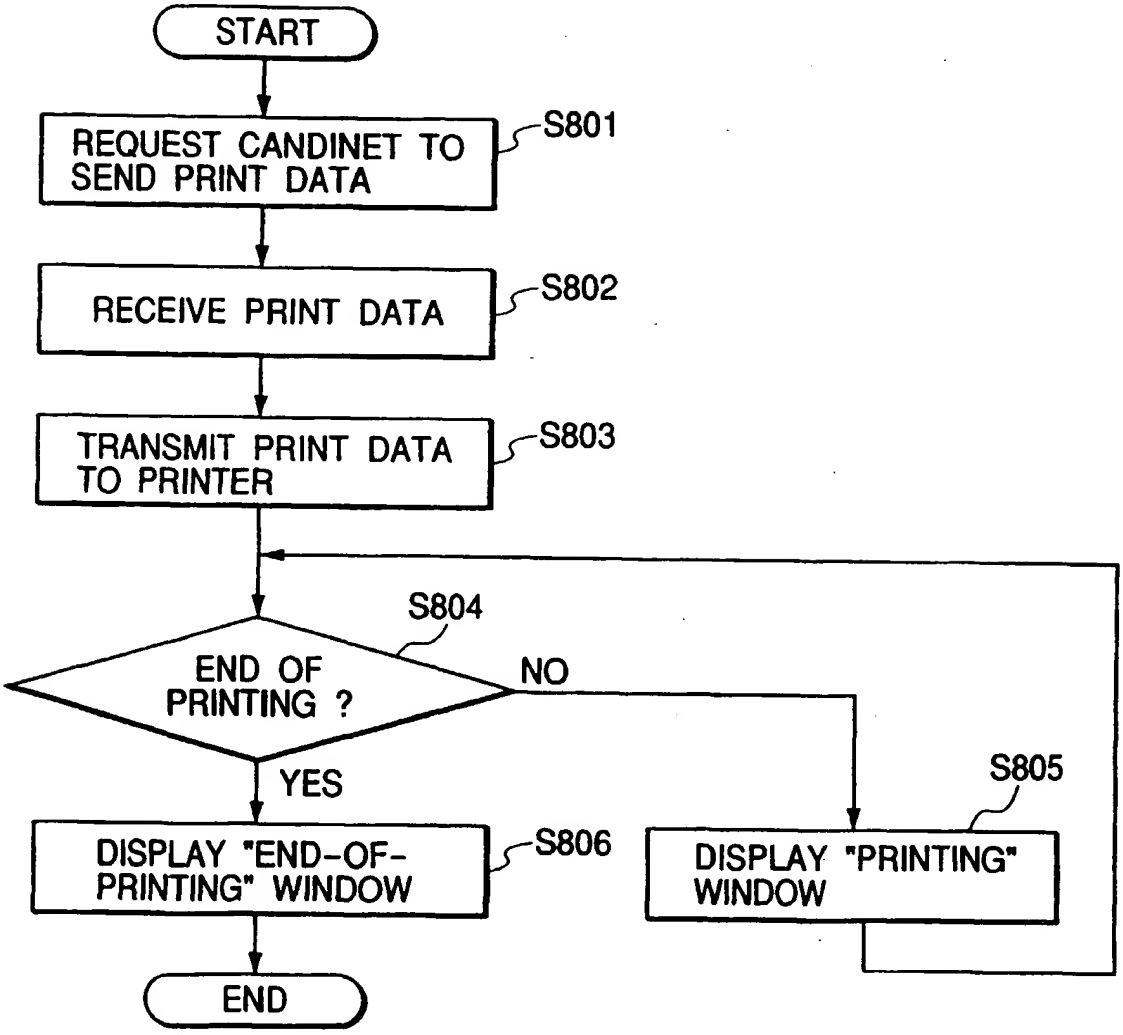

START
REQUEST CANDINET TO SEND PRINT DATA
S801
RECEIVE PRINT DATA
S802
TRANSMIT PRINT DATA TO PRINTER
S803
S804
END OF PRINTING ?
NO
YES
S805
DISPLAY "END-OF-PRINTING" WINDOW
S806
DISPLAY "PRINTING" WINDOW
END

FIG. 9

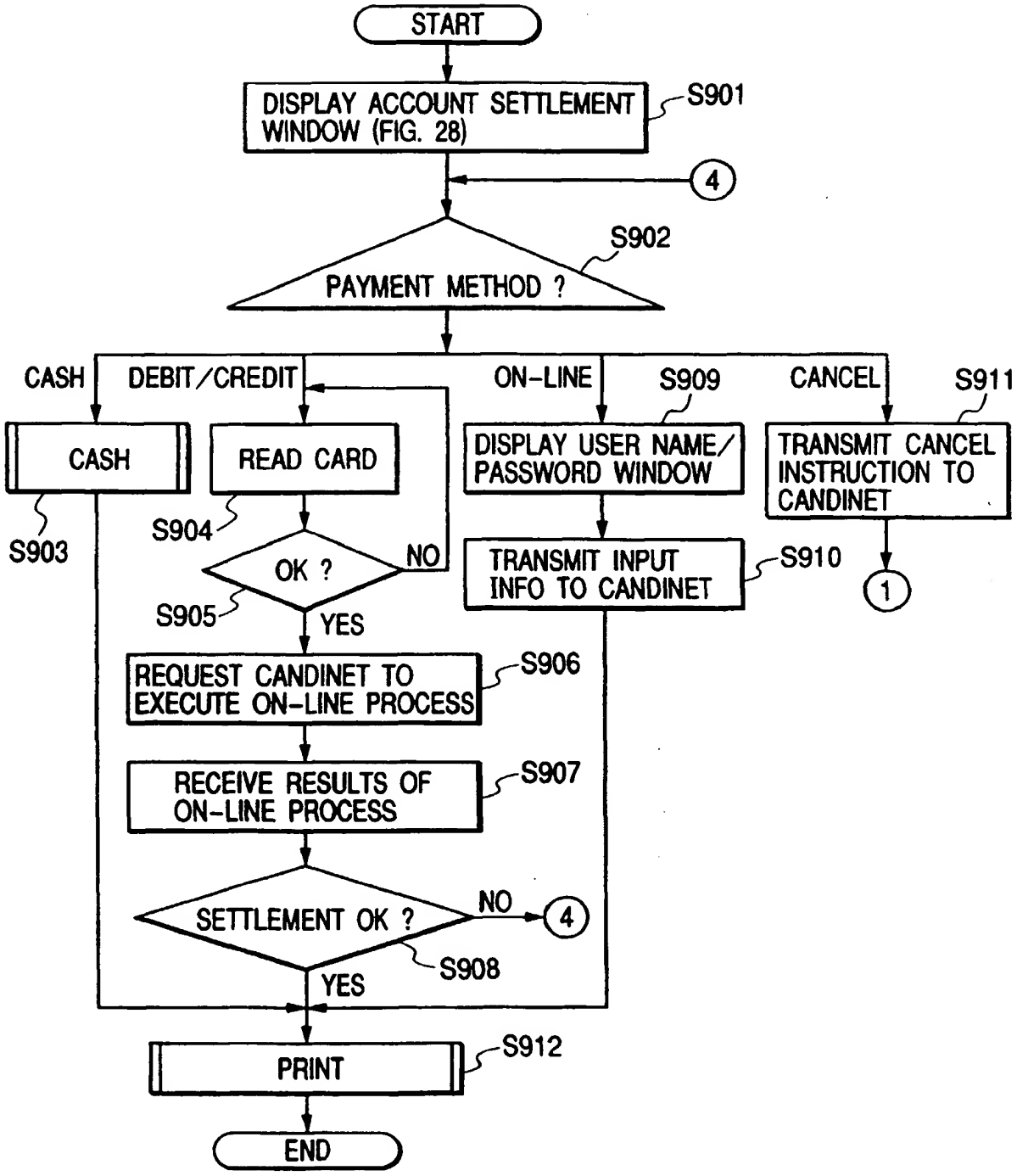

START
DISPLAY ACCOUNT SETTLEMENT WINDOW (FIG. 28)
S901
4
S902
PAYMENT METHOD ?
CASH
DEBIT/CREDIT
ON-LINE
S909
CANCEL
S911
CASH
READ CARD
DISPLAY USER NAME/ PASSWORD WINDOW
TRANSMIT CANCEL INSTRUCTION TO CANDINET
S903
S904
OK ?
NO
TRANSMIT INPUT INFO TO CANDINET
S910
1
S905
YES
REQUEST CANDINET TO EXECUTE ON-LINE PROCESS
S906
RECEIVE RESULTS OF ON-LINE PROCESS
S907
SETTLEMENT OK ?
NO
4
S908
YES
PRINT
S912
END

FIG. 10

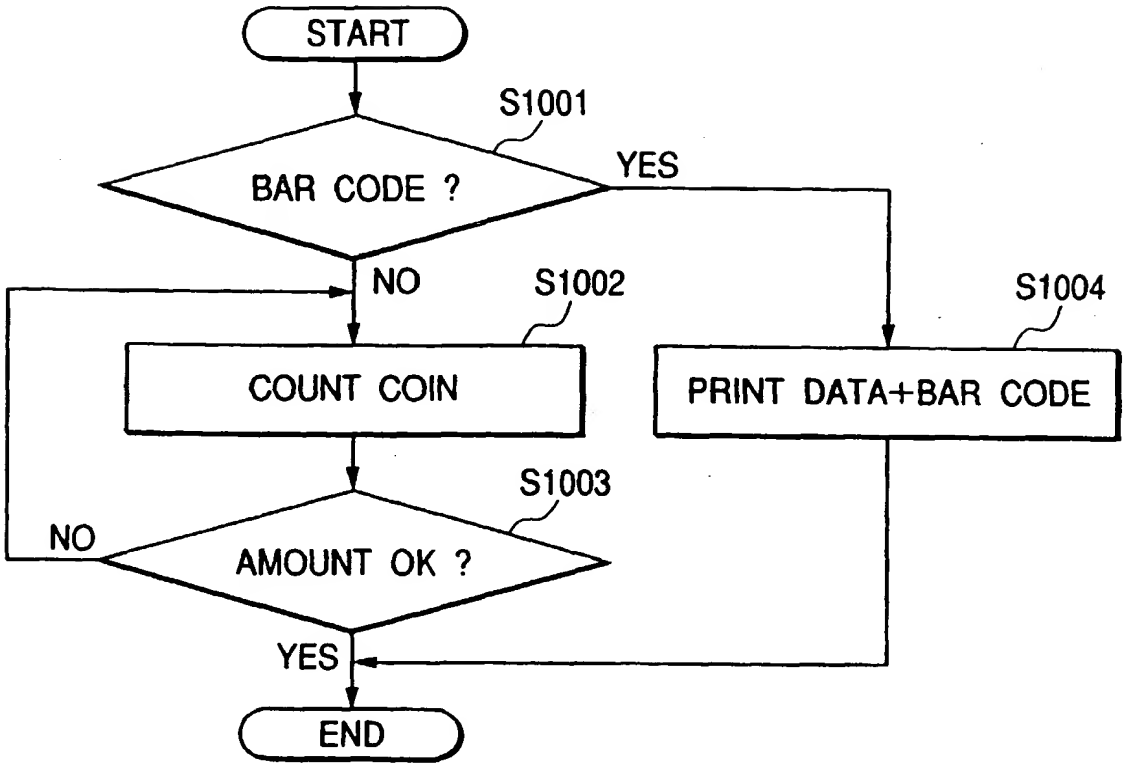

START
S1001
BAR CODE ?
YES
NO
S1002
S1004
COUNT COIN
PRINT DATA+BAR CODE
S1003
NO
AMOUNT OK ?
YES
END

FIG. 11

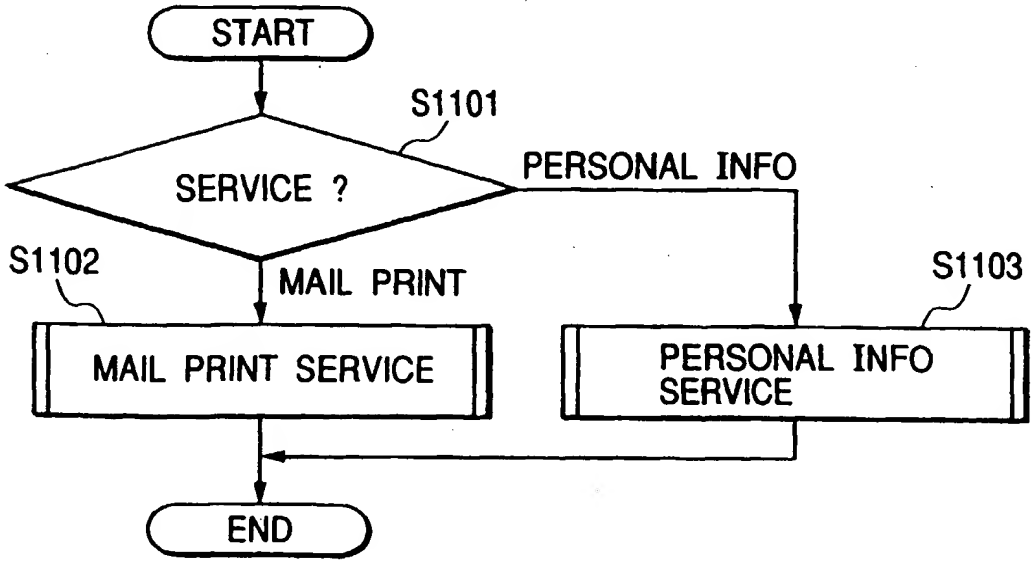

START
S1101
SERVICE ?
PERSONAL INFO
S1102
MAIL PRINT
S1103
MAIL PRINT SERVICE
PERSONAL INFO SERVICE
END

FIG. 12

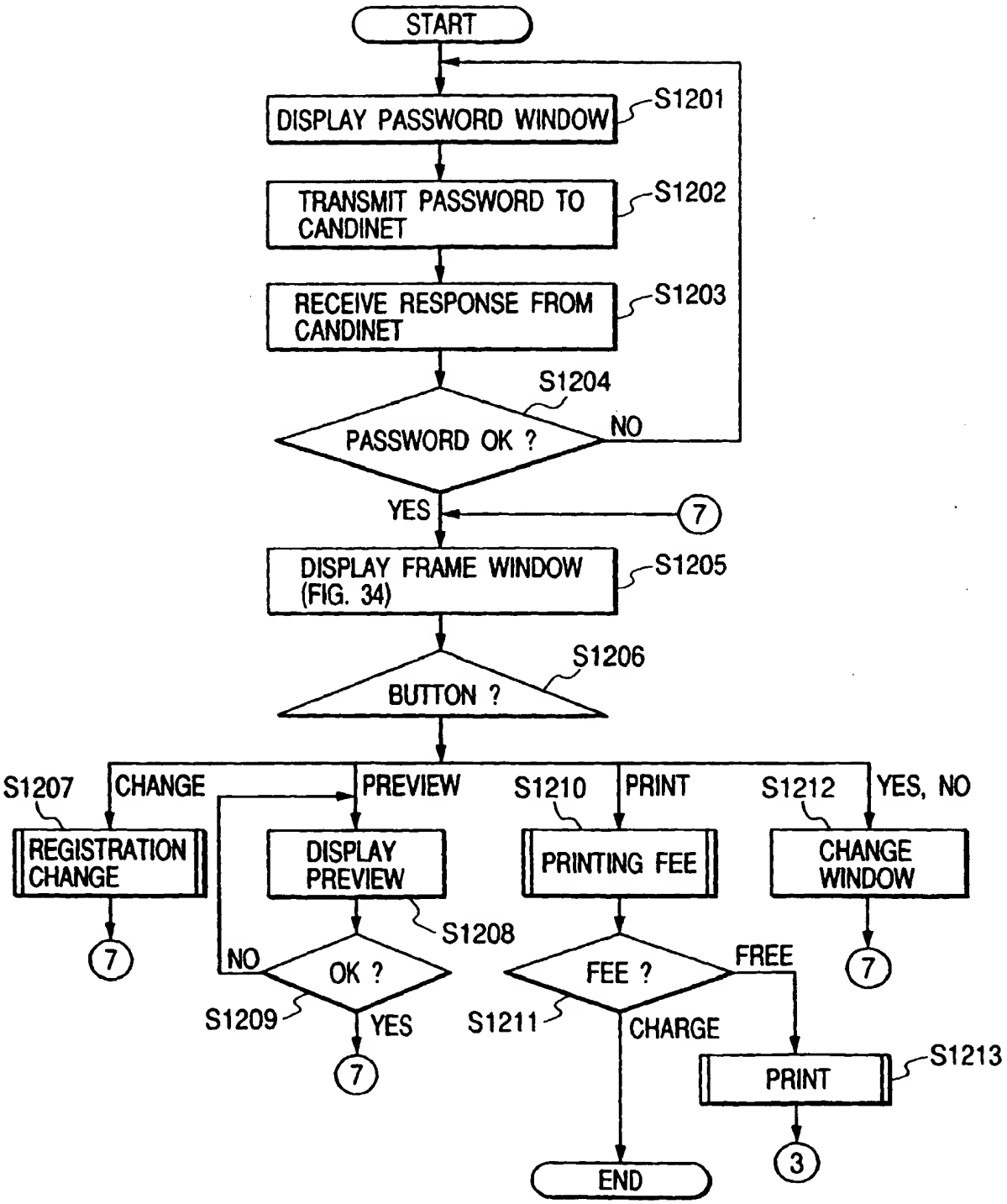

START
DISPLAY PASSWORD WINDOW
S1201
TRANSMIT PASSWORD TO CANDINET
S1202
RECEIVE RESPONSE FROM CANDINET
S1203
S1204
PASSWORD OK ?
NO
YES
7
DISPLAY FRAME WINDOW (FIG. 34)
S1205
S1206
BUTTON ?
S1207
CHANGE
PREVIEW
S1210
PRINT
S1212
YES, NO
REGISTRATION CHANGE
DISPLAY PREVIEW
PRINTING FEE
CHANGE WINDOW
7
S1208
NO
OK ?
S1209
YES
7
FEE ?
FREE
S1211
CHARGE
7
PRINT
S1213
3
END

FIG. 13

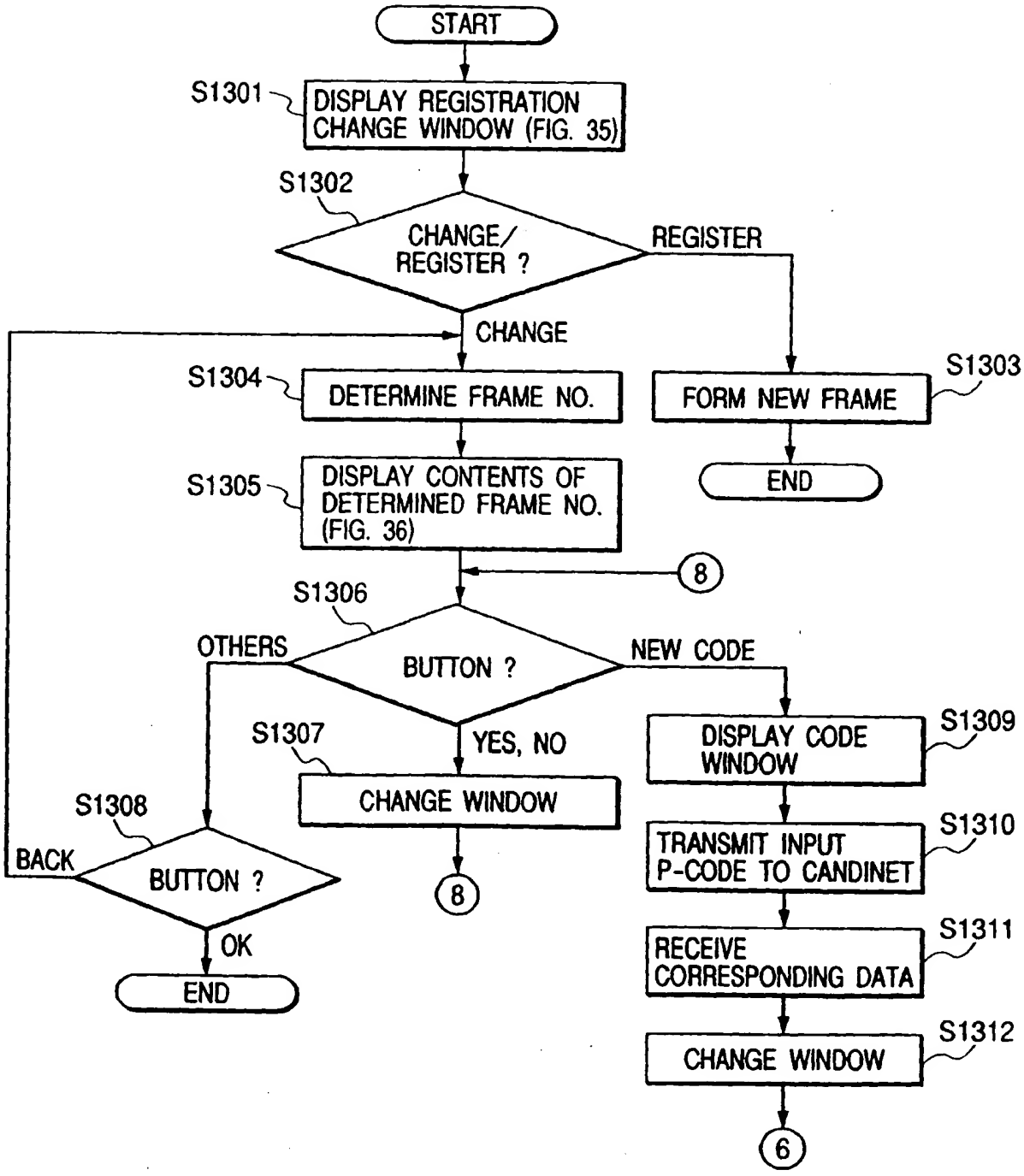

START
S1301
DISPLAY REGISTRATION CHANGE WINDOW (FIG. 35)
S1302
CHANGE/ REGISTER ?
REGISTER
CHANGE
S1303
S1304
DETERMINE FRAME NO.
FORM NEW FRAME
END
S1305
DISPLAY CONTENTS OF DETERMINED FRAME NO. (FIG. 36)
8
S1306
OTHERS
BUTTON ?
NEW CODE
S1307
YES, NO
CHANGE WINDOW
S1309
DISPLAY CODE WINDOW
S1308
BACK
BUTTON ?
8
S1310
TRANSMIT INPUT P-CODE TO CANDINET
S1311
RECEIVE CORRESPONDING DATA
OK
END
S1312
CHANGE WINDOW
6

FIG. 14

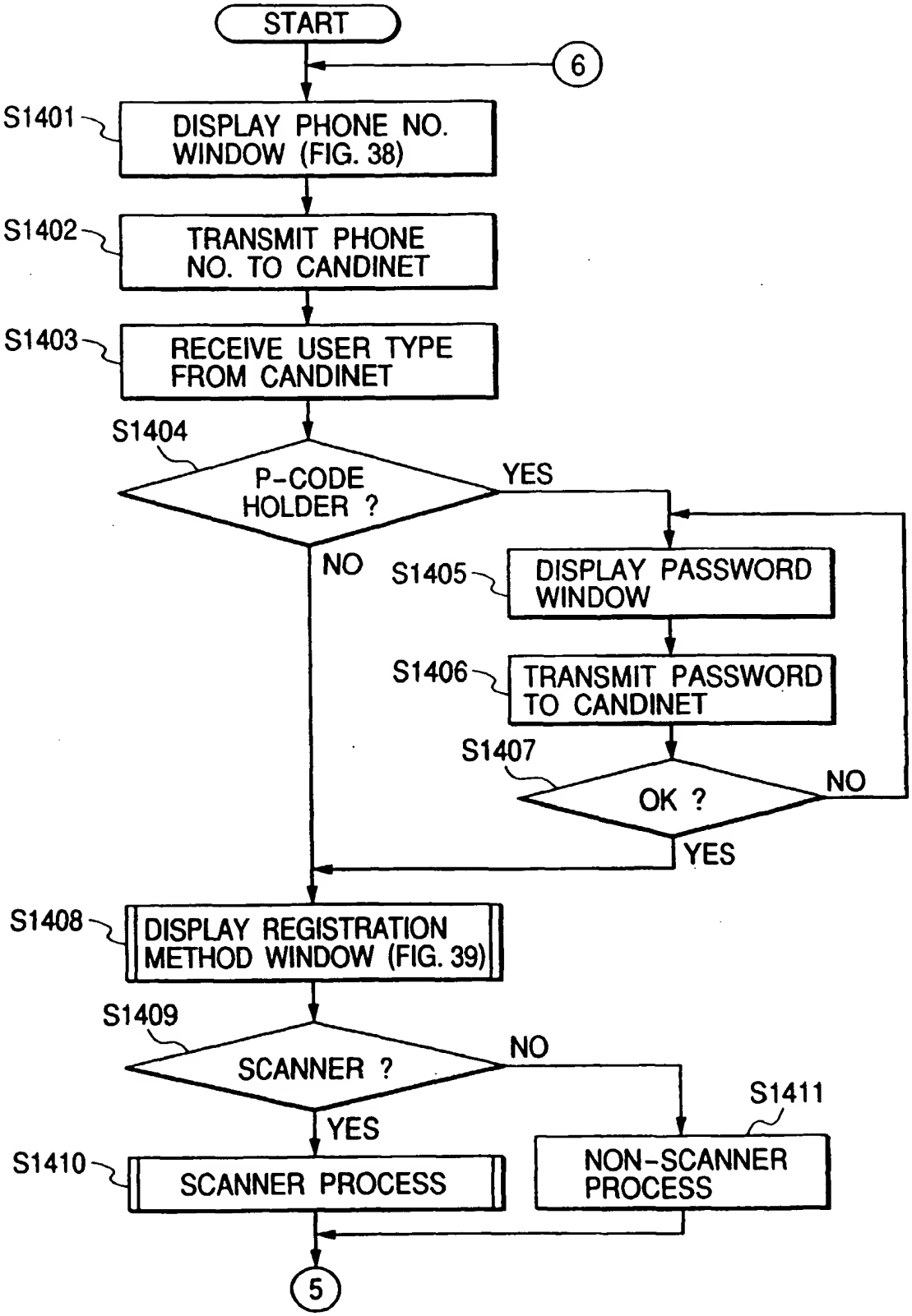

START
6
S1401
DISPLAY PHONE NO. WINDOW (FIG. 38)
S1402
TRANSMIT PHONE NO. TO CANDINET
S1403
RECEIVE USER TYPE FROM CANDINET
S1404
P-CODE HOLDER ?
YES
NO
S1405
DISPLAY PASSWORD WINDOW
S1406
TRANSMIT PASSWORD TO CANDINET
S1407
OK ?
NO
YES
S1408
DISPLAY REGISTRATION METHOD WINDOW (FIG. 39)
S1409
SCANNER ?
NO
YES
S1410
SCANNER PROCESS
S1411
NON-SCANNER PROCESS
5

FIG. 15

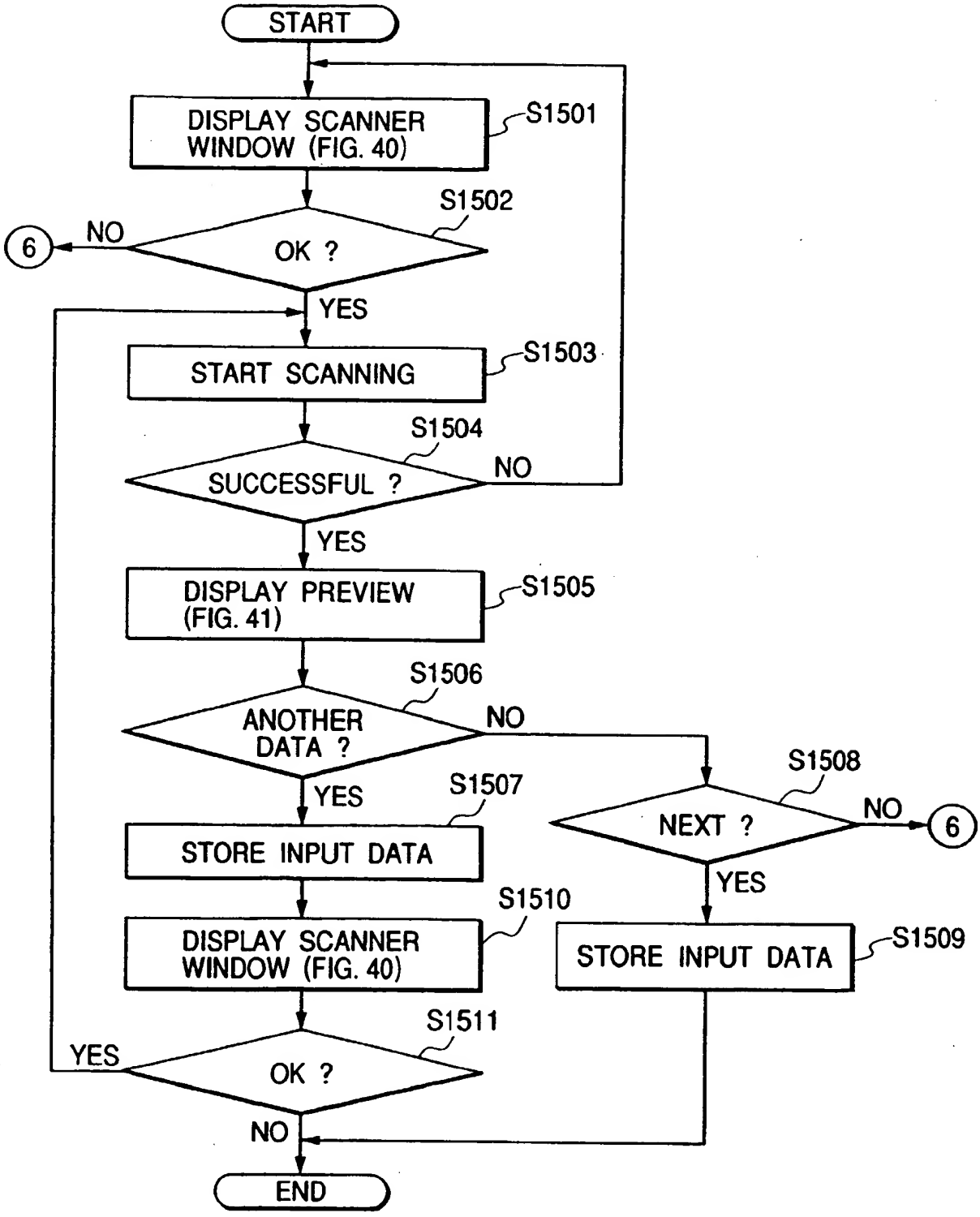

START
DISPLAY SCANNER WINDOW (FIG. 40)
S1501
S1502
OK ?
NO
6
YES
START SCANNING
S1503
S1504
SUCCESSFUL ?
NO
YES
DISPLAY PREVIEW (FIG. 41)
S1505
S1506
ANOTHER DATA ?
NO
YES
S1507
STORE INPUT DATA
S1508
NEXT ?
NO
6
YES
S1510
DISPLAY SCANNER WINDOW (FIG. 40)
STORE INPUT DATA
S1509
S1511
YES
OK ?
NO
END

FIG. 16

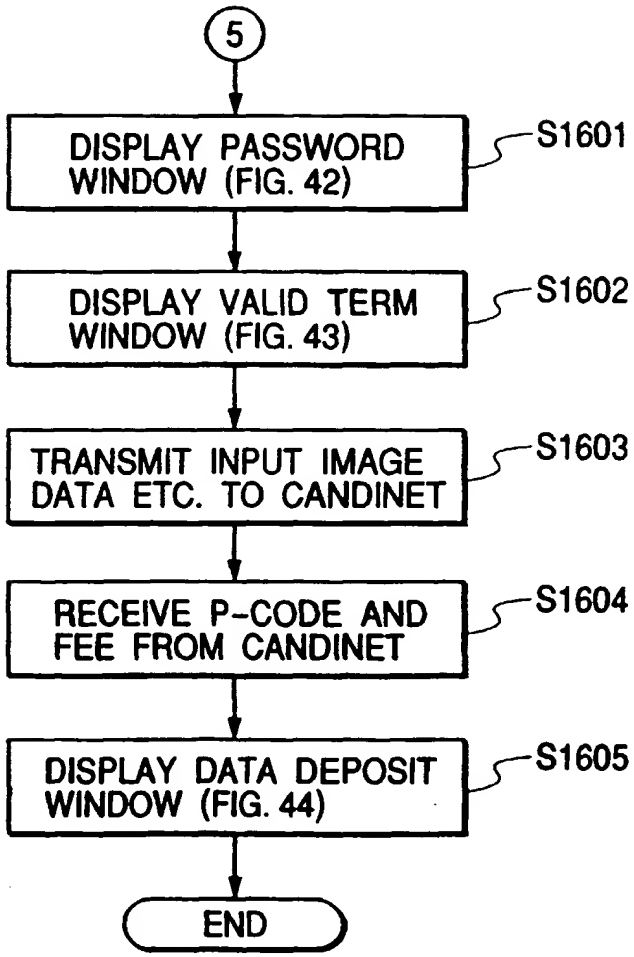

5
DISPLAY PASSWORD WINDOW (FIG. 42)
S1601
DISPLAY VALID TERM WINDOW (FIG. 43)
S1602
TRANSMIT INPUT IMAGE DATA ETC. TO CANDINET
S1603
RECEIVE P-CODE AND FEE FROM CANDINET
S1604
DISPLAY DATA DEPOSIT WINDOW (FIG. 44)
S1605
END

FIG. 17

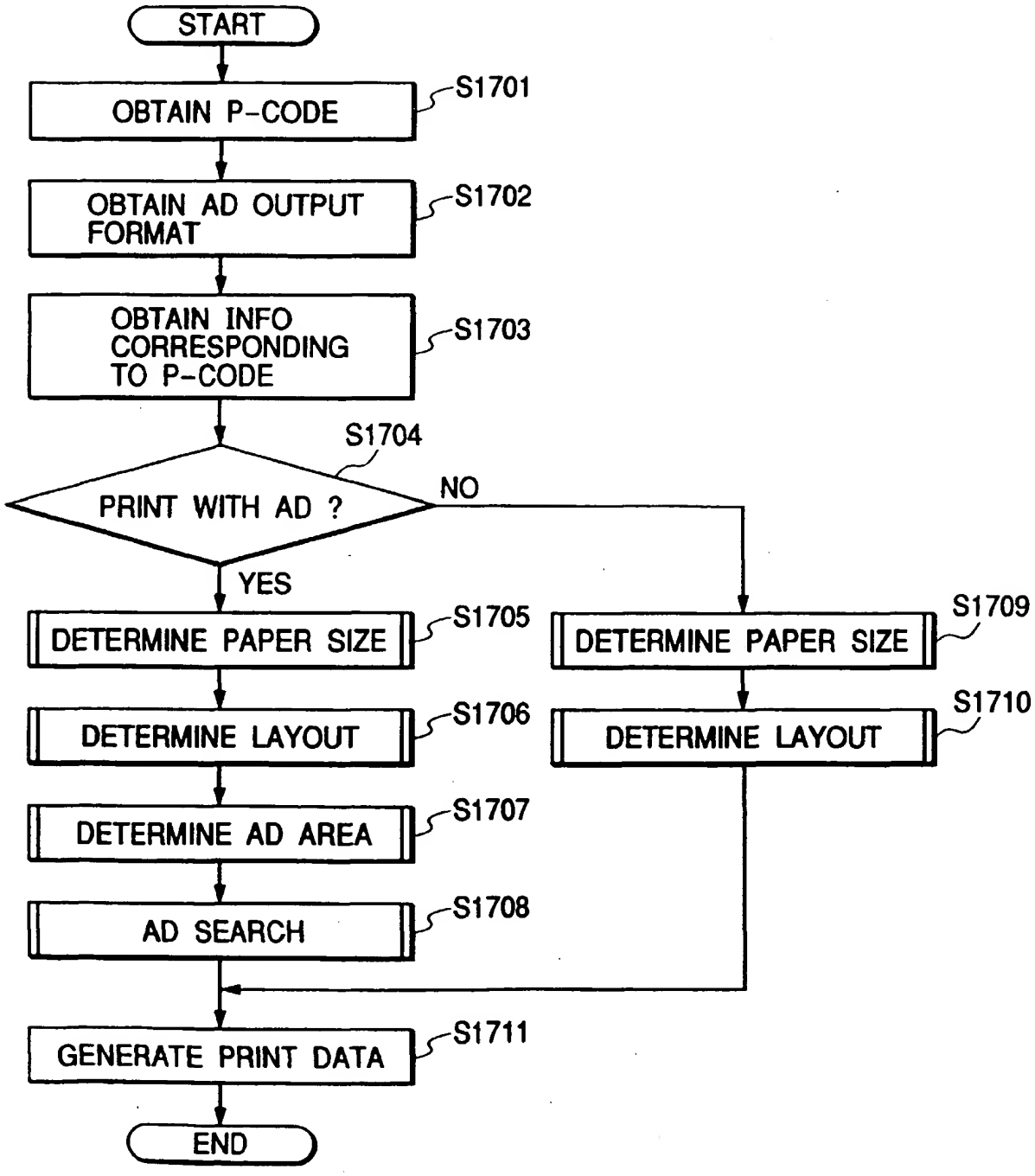

START
OBTAIN P-CODE
S1701
OBTAIN AD OUTPUT FORMAT
S1702
OBTAIN INFO CORRESPONDING TO P-CODE
S1703
S1704
PRINT WITH AD ?
NO
YES
DETERMINE PAPER SIZE
S1705
DETERMINE LAYOUT
S1706
DETERMINE AD AREA
S1707
AD SEARCH
S1708
DETERMINE PAPER SIZE
S1709
DETERMINE LAYOUT
S1710
GENERATE PRINT DATA
S1711
END

FIG. 18

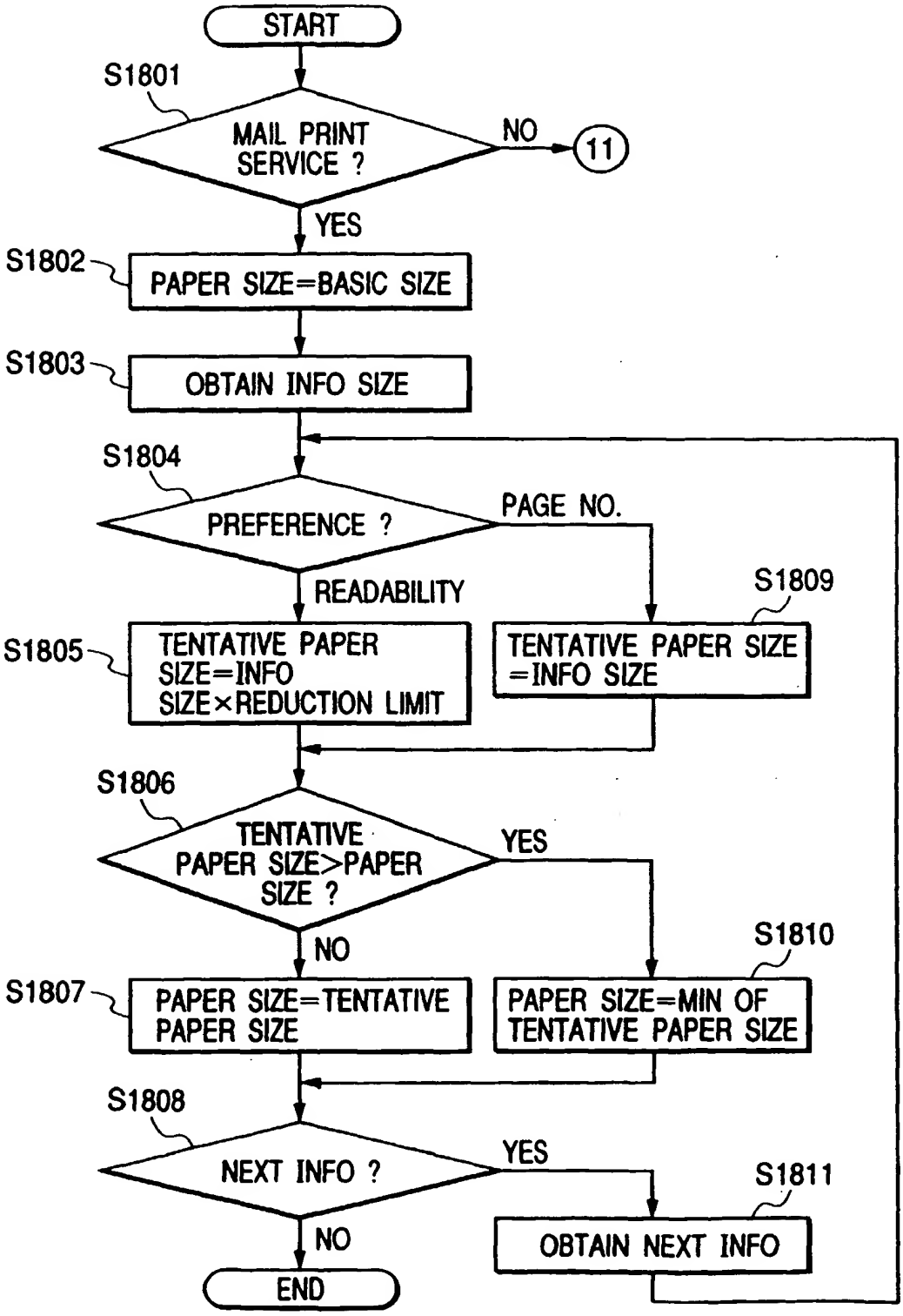

START
S1801
MAIL PRINT SERVICE ?
NO
11
YES
S1802
PAPER SIZE=BASIC SIZE
S1803
OBTAIN INFO SIZE
S1804
PREFERENCE ?
PAGE NO.
READABILITY
S1809
TENTATIVE PAPER SIZE =INFO SIZE
S1805
TENTATIVE PAPER SIZE=INFO SIZE×REDUCTION LIMIT
S1806
TENTATIVE PAPER SIZE>PAPER SIZE ?
YES
NO
S1810
PAPER SIZE=MIN OF TENTATIVE PAPER SIZE
S1807
PAPER SIZE=TENTATIVE PAPER SIZE
S1808
NEXT INFO ?
YES
S1811
NO
OBTAIN NEXT INFO
END

FIG. 19

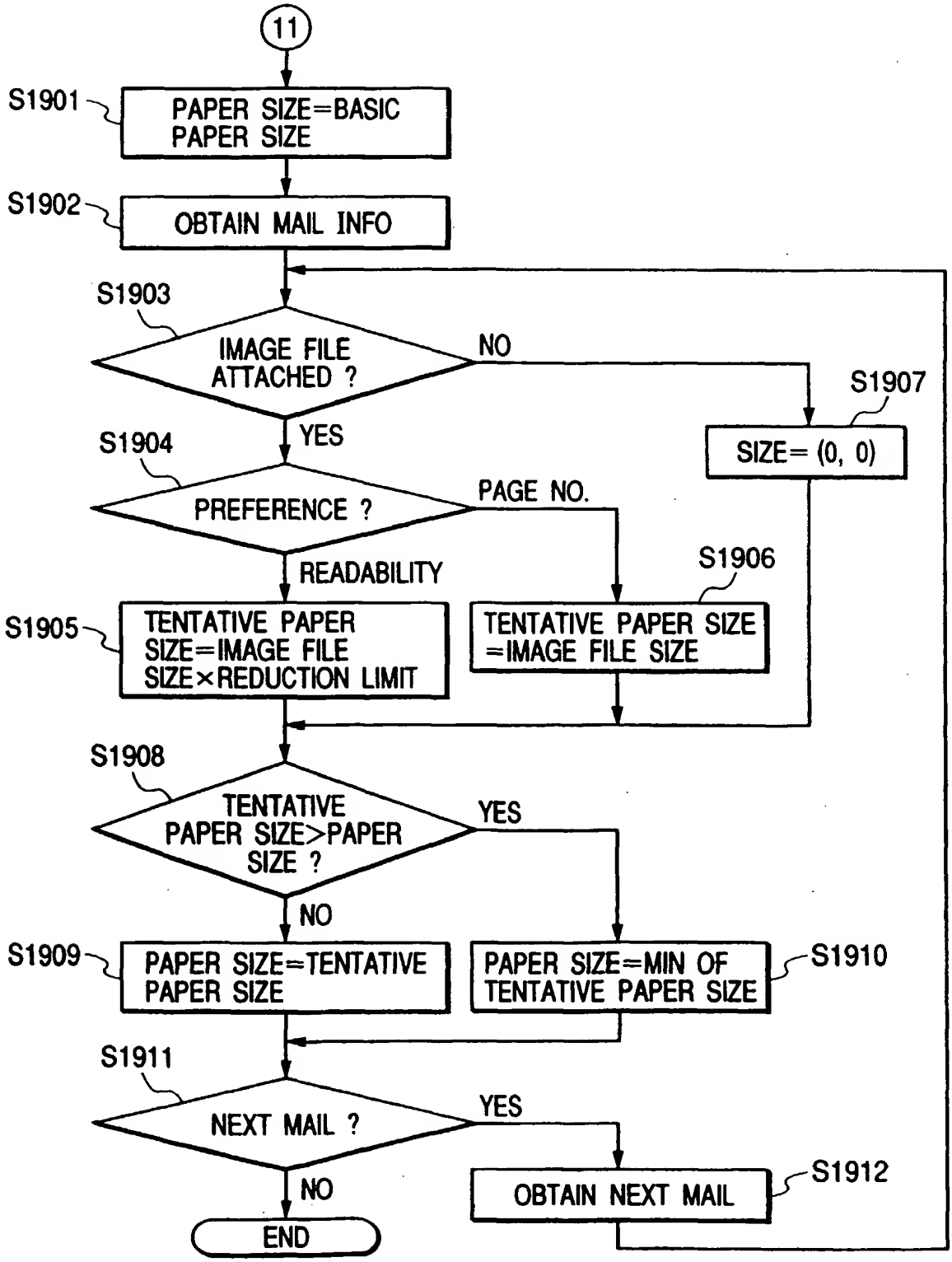

11
S1901
PAPER SIZE=BASIC PAPER SIZE
S1902
OBTAIN MAIL INFO
S1903
IMAGE FILE ATTACHED ?
NO
S1907
SIZE= (0, 0)
YES
S1904
PREFERENCE ?
PAGE NO.
READABILITY
S1906
S1905
TENTATIVE PAPER SIZE=IMAGE FILE SIZE×REDUCTION LIMIT
TENTATIVE PAPER SIZE =IMAGE FILE SIZE
S1908
TENTATIVE PAPER SIZE>PAPER SIZE ?
YES
NO
S1909
PAPER SIZE=TENTATIVE PAPER SIZE
PAPER SIZE=MIN OF TENTATIVE PAPER SIZE
S1910
S1911
NEXT MAIL ?
YES
NO
S1912
OBTAIN NEXT MAIL
END

FIG. 20

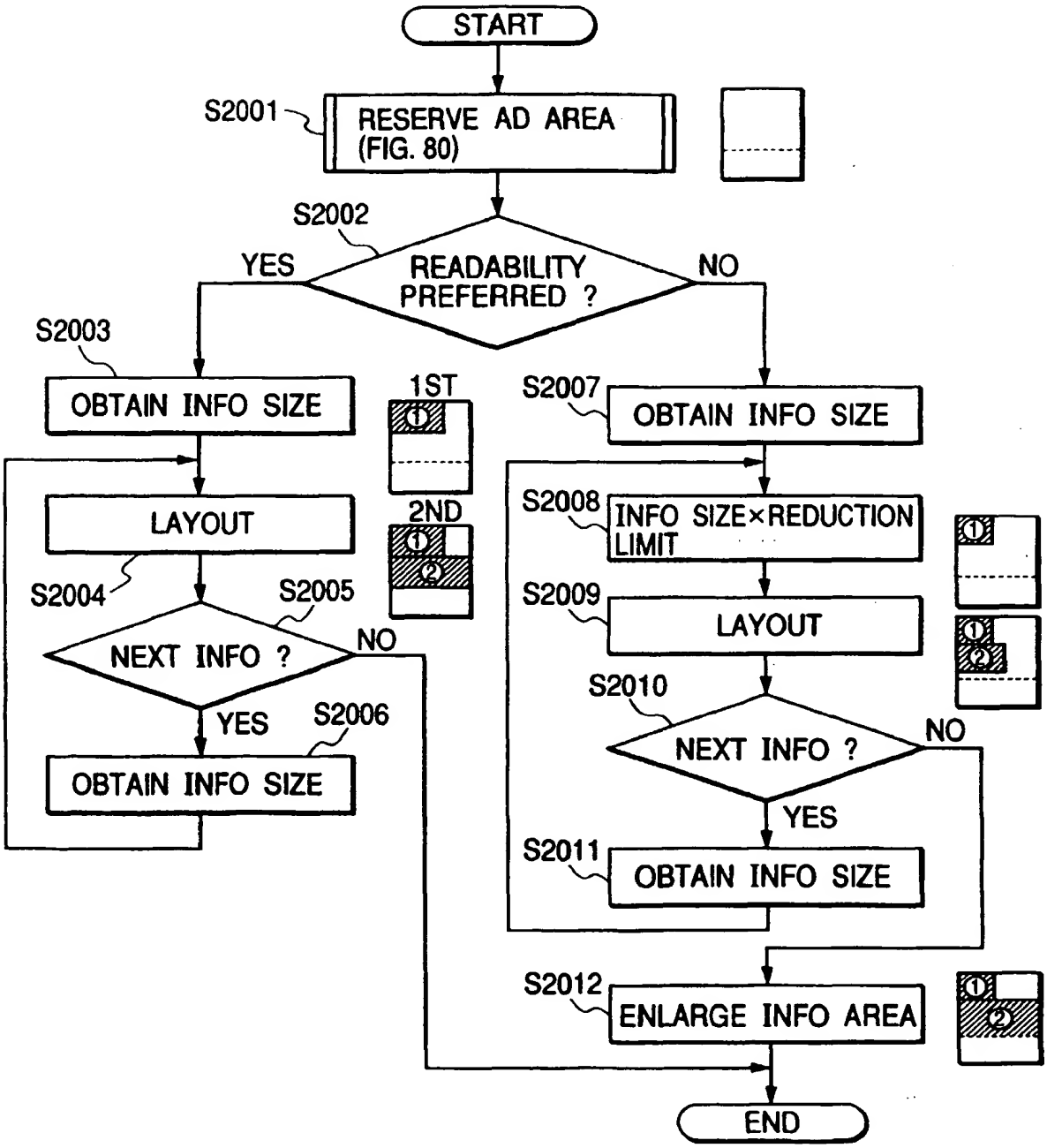

START
S2001
RESERVE AD AREA (FIG. 80)
S2002
READABILITY PREFERRED ?
YES
NO
S2003
OBTAIN INFO SIZE
1ST
LAYOUT
2ND
S2004
S2005
NEXT INFO ?
NO
YES
S2006
OBTAIN INFO SIZE
S2007
OBTAIN INFO SIZE
S2008
INFO SIZE×REDUCTION LIMIT
S2009
LAYOUT
S2010
NEXT INFO ?
NO
YES
S2011
OBTAIN INFO SIZE
S2012
ENLARGE INFO AREA
END

FIG. 21

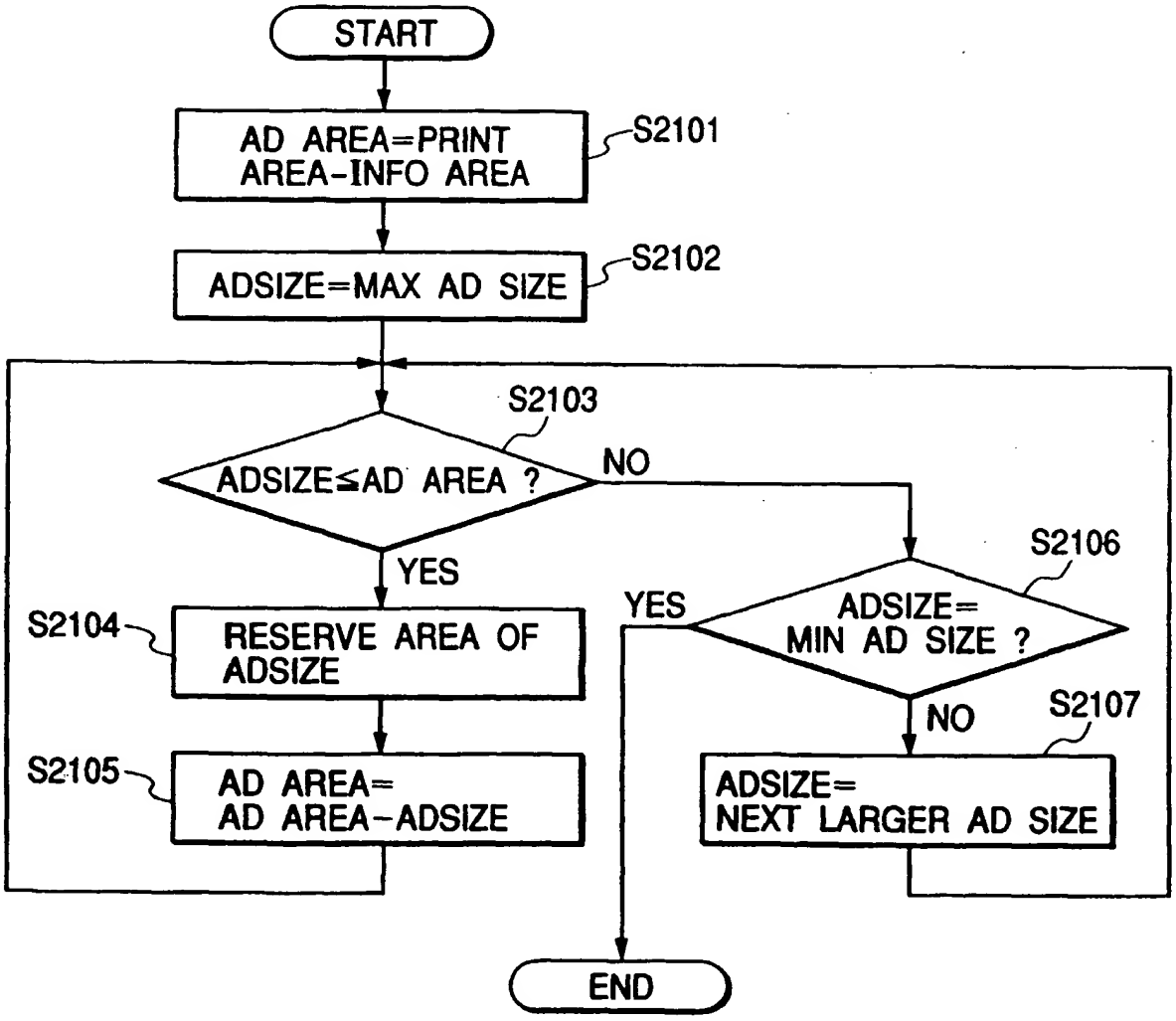

START
AD AREA=PRINT AREA-INFO AREA
S2101
ADSIZE=MAX AD SIZE
S2102
S2103
ADSIZE≤AD AREA ?
NO
YES
S2104
RESERVE AREA OF ADSIZE
S2105
AD AREA= AD AREA-ADSIZE
S2106
YES
ADSIZE= MIN AD SIZE ?
NO
S2107
ADSIZE= NEXT LARGER AD SIZE
END

FIG. 22

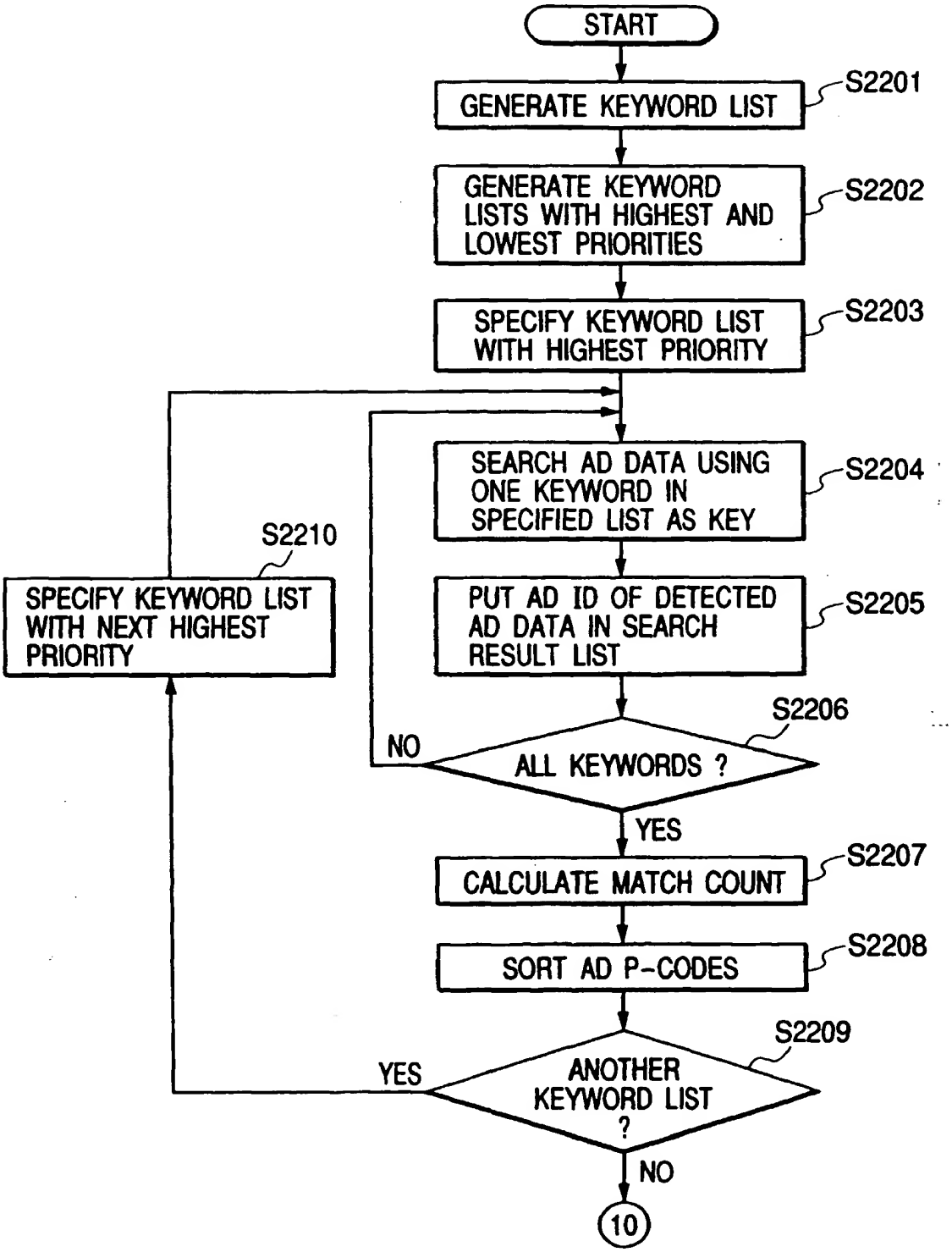

START
GENERATE KEYWORD LIST
S2201
GENERATE KEYWORD LISTS WITH HIGHEST AND LOWEST PRIORITIES
S2202
SPECIFY KEYWORD LIST WITH HIGHEST PRIORITY
S2203
SEARCH AD DATA USING ONE KEYWORD IN SPECIFIED LIST AS KEY
S2204
PUT AD ID OF DETECTED AD DATA IN SEARCH RESULT LIST
S2205
S2206
NO
ALL KEYWORDS ?
YES
CALCULATE MATCH COUNT
S2207
SORT AD P-CODES
S2208
S2209
YES
ANOTHER KEYWORD LIST ?
NO
10
S2210
SPECIFY KEYWORD LIST WITH NEXT HIGHEST PRIORITY

FIG. 23

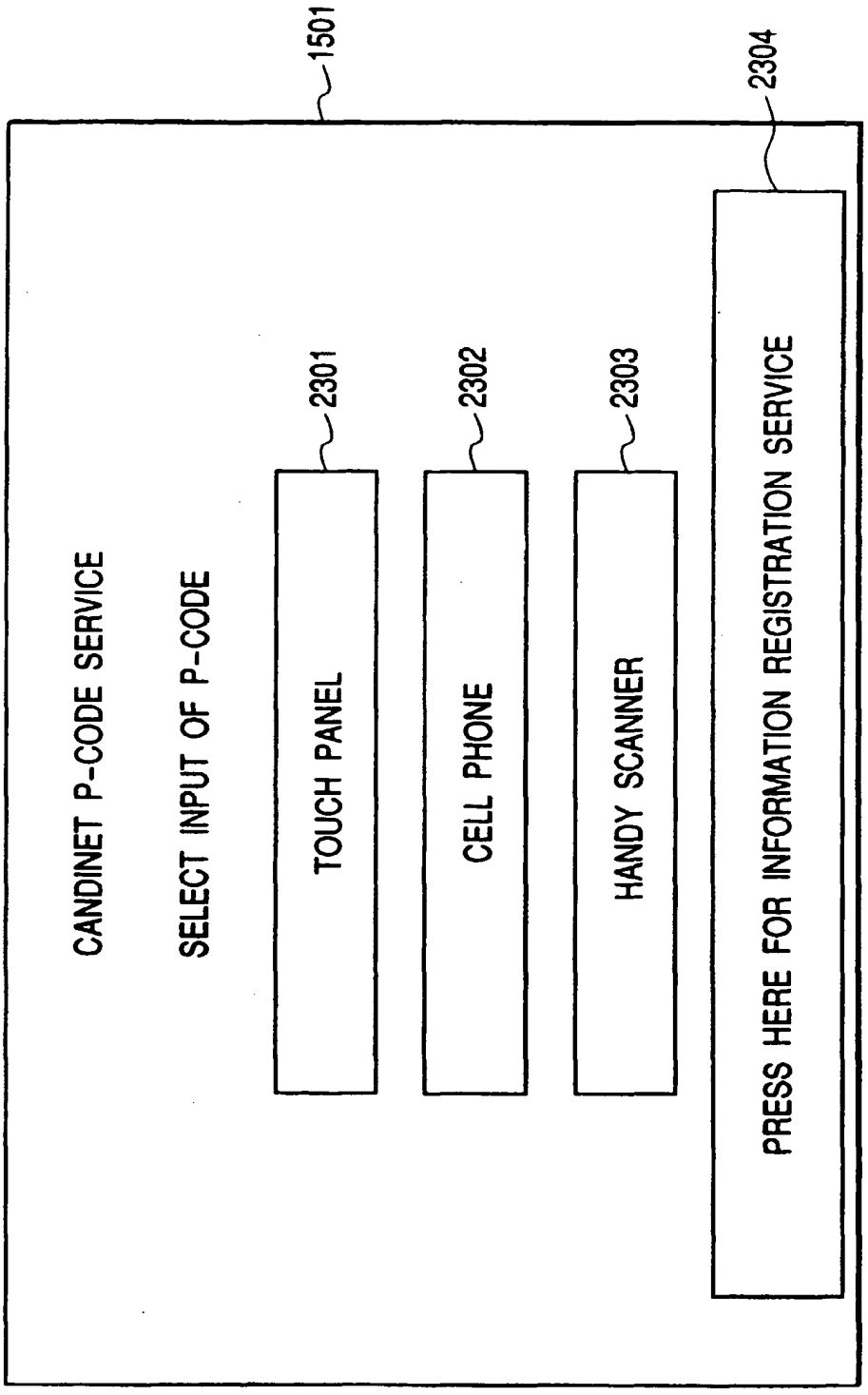

1501
2304
CANDINET P-CODE SERVICE
SELECT INPUT OF P-CODE
2301
TOUCH PANEL
2302
CELL PHONE
2303
HANDY SCANNER
PRESS HERE FOR INFORMATION REGISTRATION SERVICE

FIG. 24

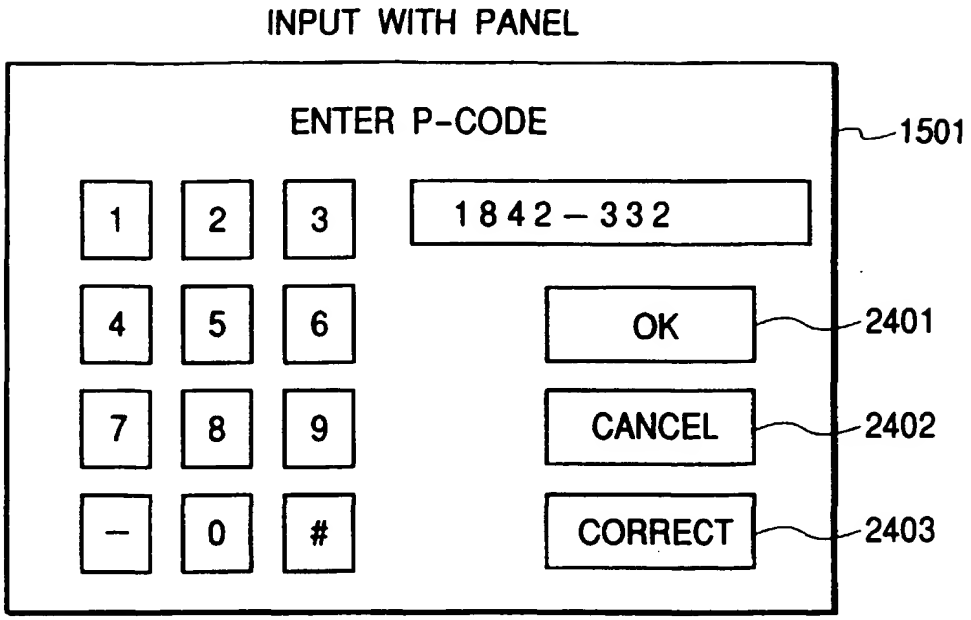

INPUT WITH PANEL
ENTER P-CODE
1501
1
2
3
1842-332
4
5
6
OK
2401
7
8
9
CANCEL
2402
-
0
#
CORRECT
2403

FIG. 25

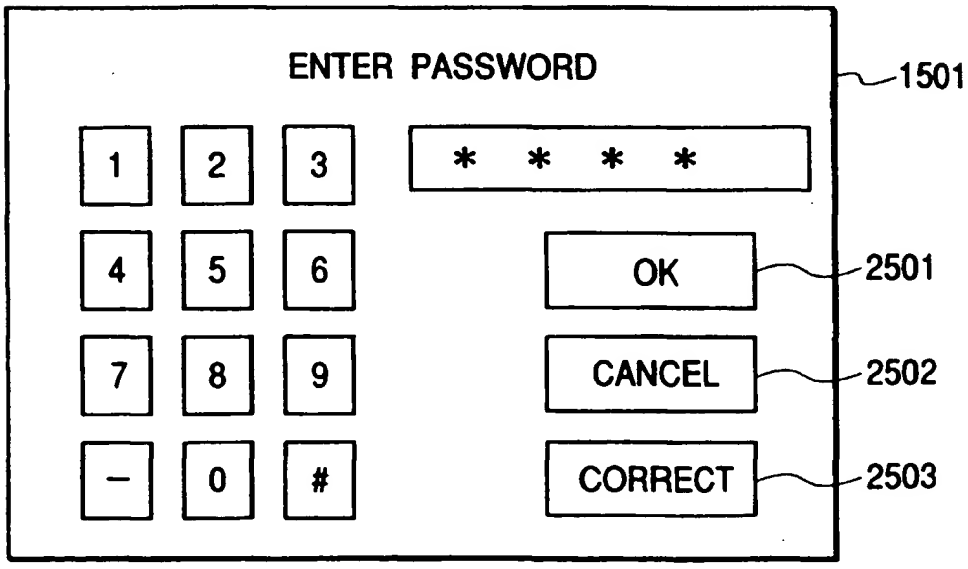

ENTER PASSWORD
1501
1
2
3
* * * *
4
5
6
OK
2501
7
8
9
CANCEL
2502
-
0
#
CORRECT
2503

FIG. 26

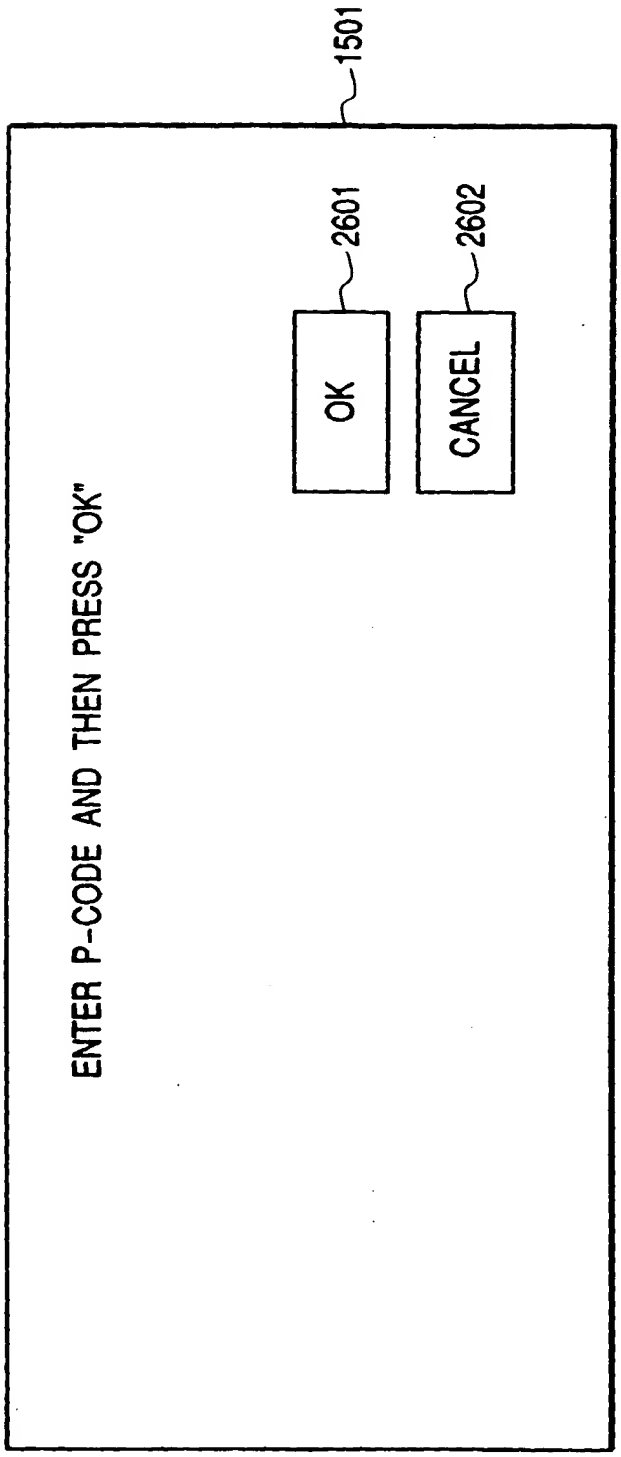

INPUT WITH PHONE
ENTER P-CODE AND THEN PRESS "OK"
OK
CANCEL
1501
2601
2602

FIG. 27

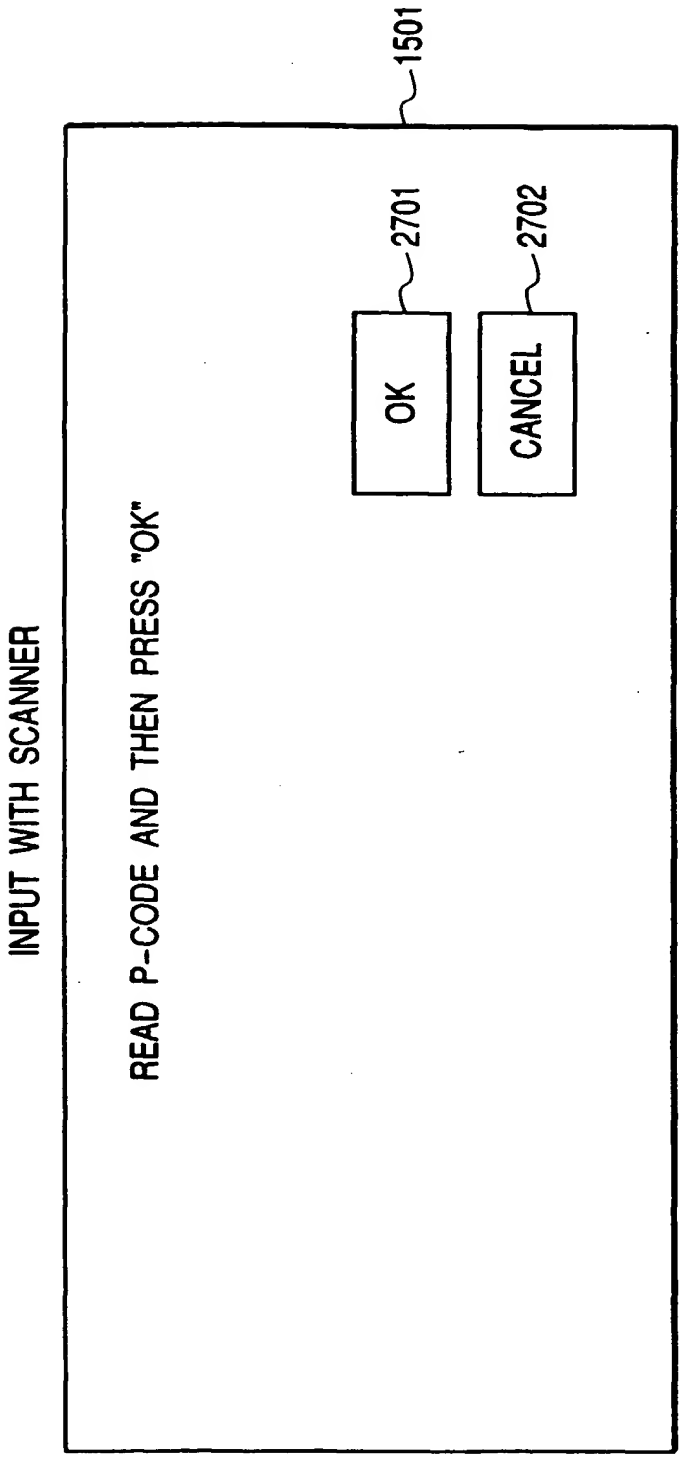

1501
INPUT WITH SCANNER
READ P-CODE AND THEN PRESS "OK"
2701
OK
2702
CANCEL

FIG. 28

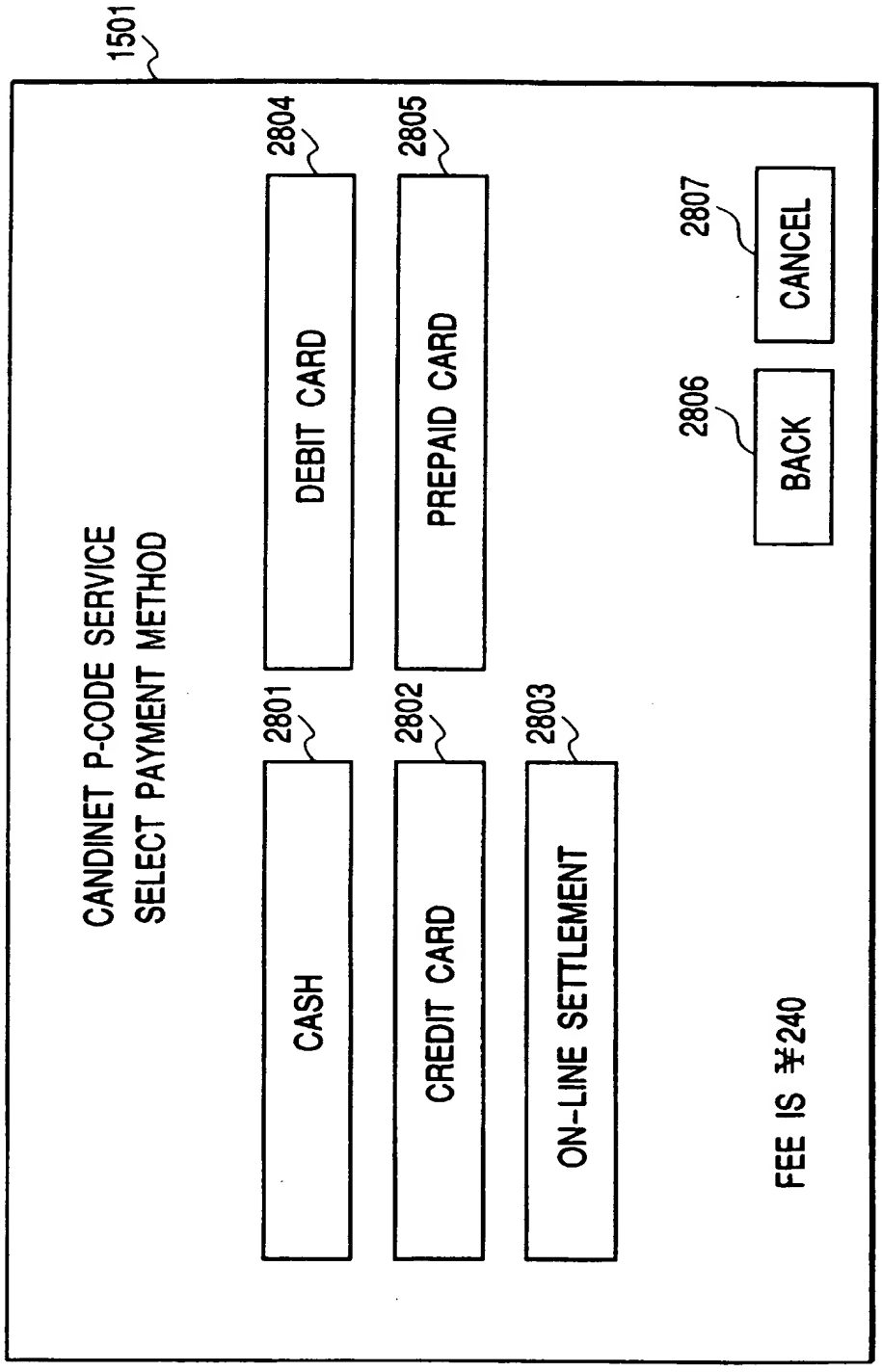

1501
CANDINET P-CODE SERVICE
SELECT PAYMENT METHOD
2801
CASH
2802
CREDIT CARD
2803
ON-LINE SETTLEMENT
2804
DEBIT CARD
2805
PREPAID CARD
2806
BACK
2807
CANCEL
FEE IS ¥240

FIG. 29

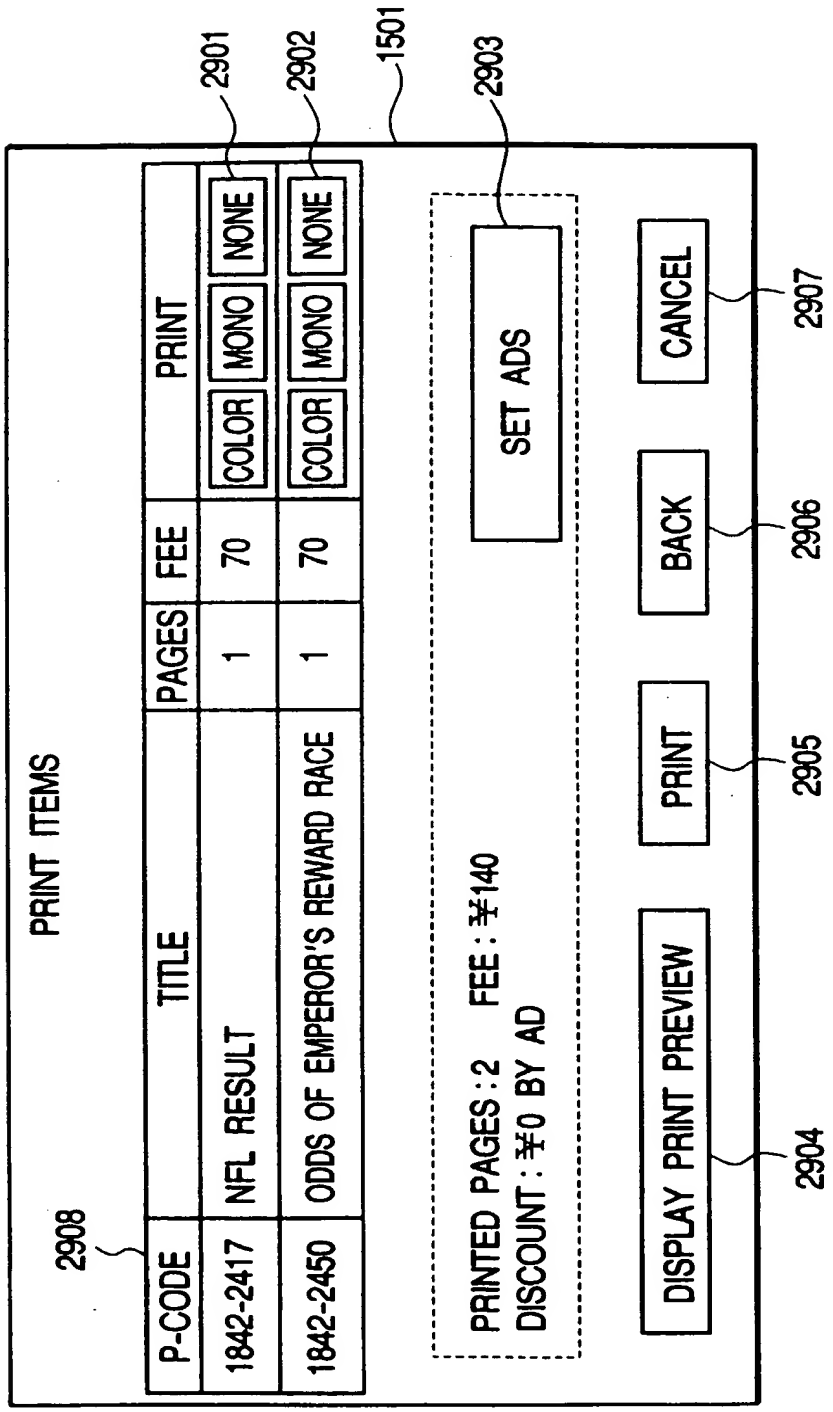

PRINT ITEMS
2908
P-CODE
TITLE
PAGES
FEE
PRINT
1842-2417
NFL RESULT
1
70
COLOR
MONO
NONE
1842-2450
ODDS OF EMPEROR'S REWARD RACE
1
70
COLOR
MONO
NONE
2901
2902
1501
2903
PRINTED PAGES : 2 FEE : ¥140
DISCOUNT : ¥0 BY AD
SET ADS
DISPLAY PRINT PREVIEW
PRINT
BACK
CANCEL
2904
2905
2906
2907

FIG. 30

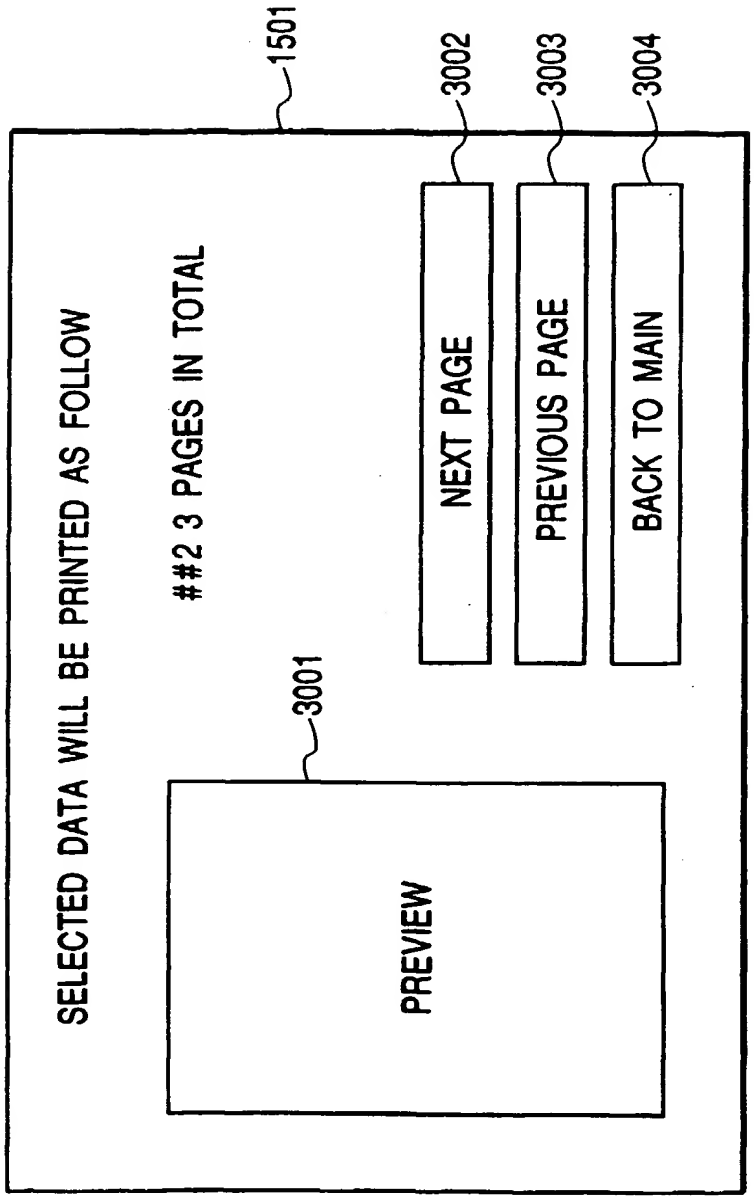

1501
3002
3003
3004
SELECTED DATA WILL BE PRINTED AS FOLLOW
##2 3 PAGES IN TOTAL
NEXT PAGE
PREVIOUS PAGE
BACK TO MAIN
3001
PREVIEW

FIG. 31

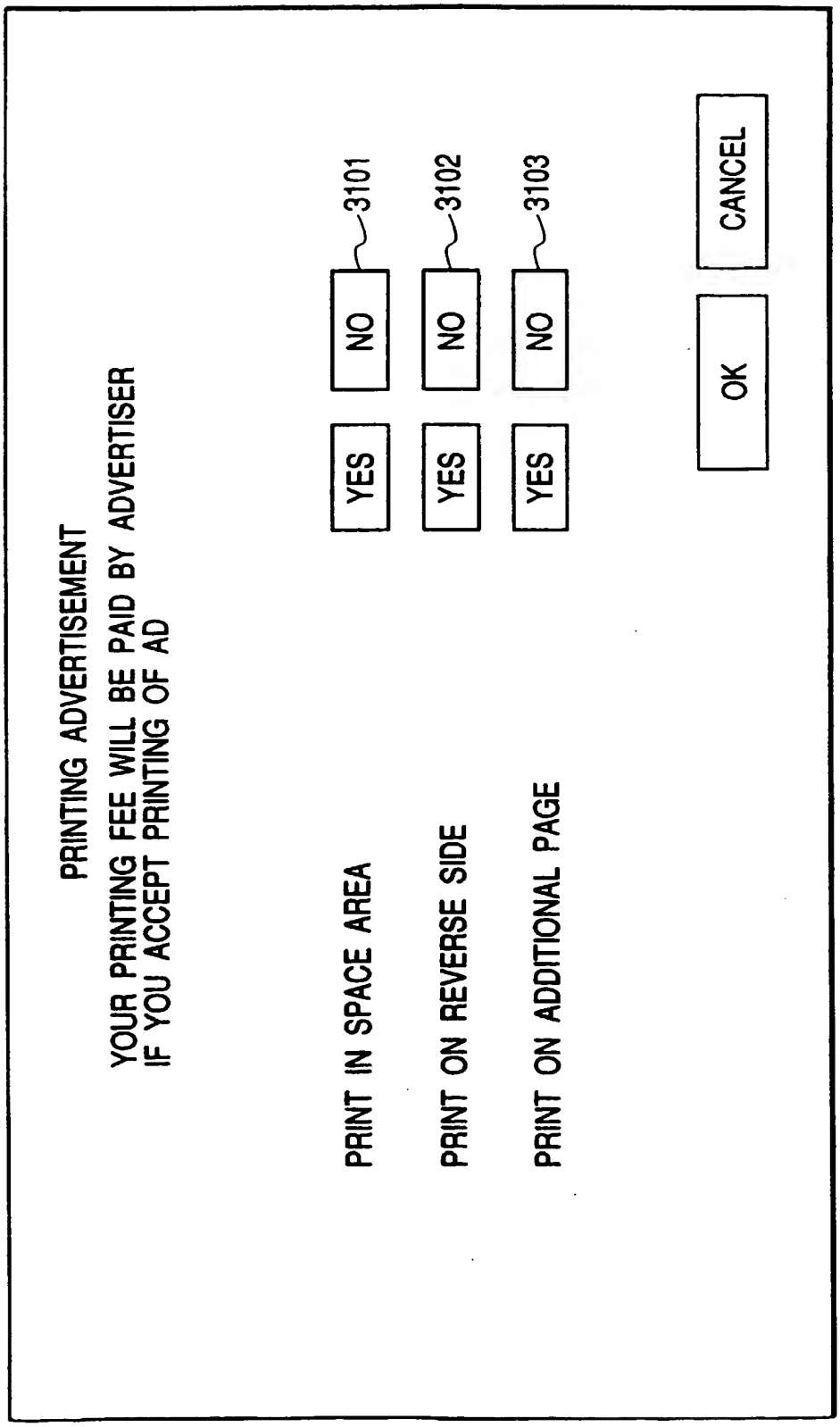

PRINTING ADVERTISEMENT
YOUR PRINTING FEE WILL BE PAID BY ADVERTISER
IF YOU ACCEPT PRINTING OF AD
PRINT IN SPACE AREA
YES
NO
3101
PRINT ON REVERSE SIDE
YES
NO
3102
PRINT ON ADDITIONAL PAGE
YES
NO
3103
OK
CANCEL

FIG. 32

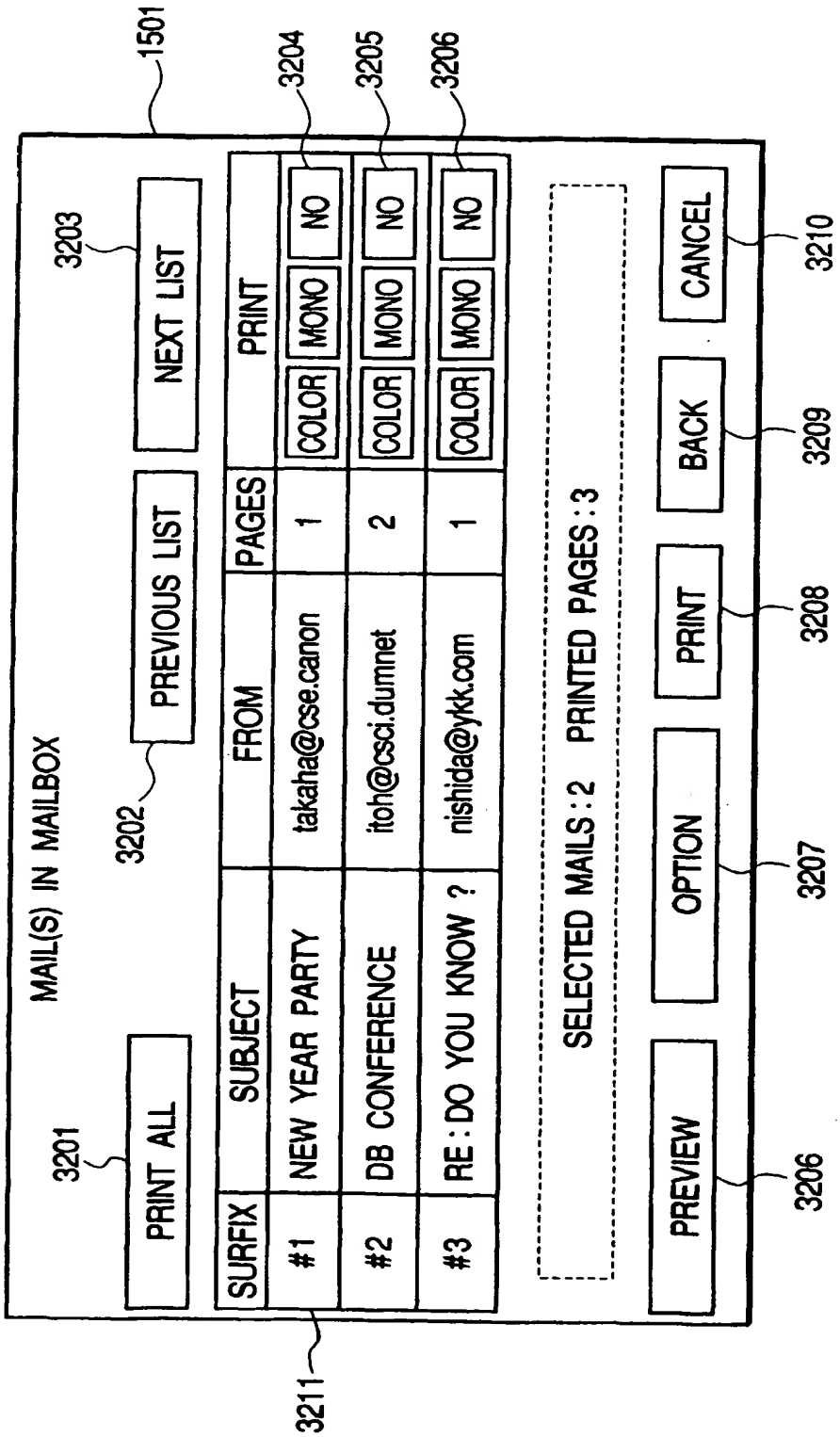

1501
MAIL(S) IN MAILBOX
3201
PRINT ALL
3202
PREVIOUS LIST
3203
NEXT LIST
SURFIX
SUBJECT
FROM
PAGES
PRINT
3204
3205
3206
#1
NEW YEAR PARTY
takaha@cse.canon
1
COLOR
MONO
NO
#2
DB CONFERENCE
itoh@csci.dumnet
2
COLOR
MONO
NO
#3
RE:DO YOU KNOW ?
nishida@ykk.com
1
COLOR
MONO
NO
SELECTED MAILS:2 PRINTED PAGES:3
PREVIEW
3206
OPTION
3207
PRINT
3208
BACK
3209
CANCEL
3210
3211

FIG. 33

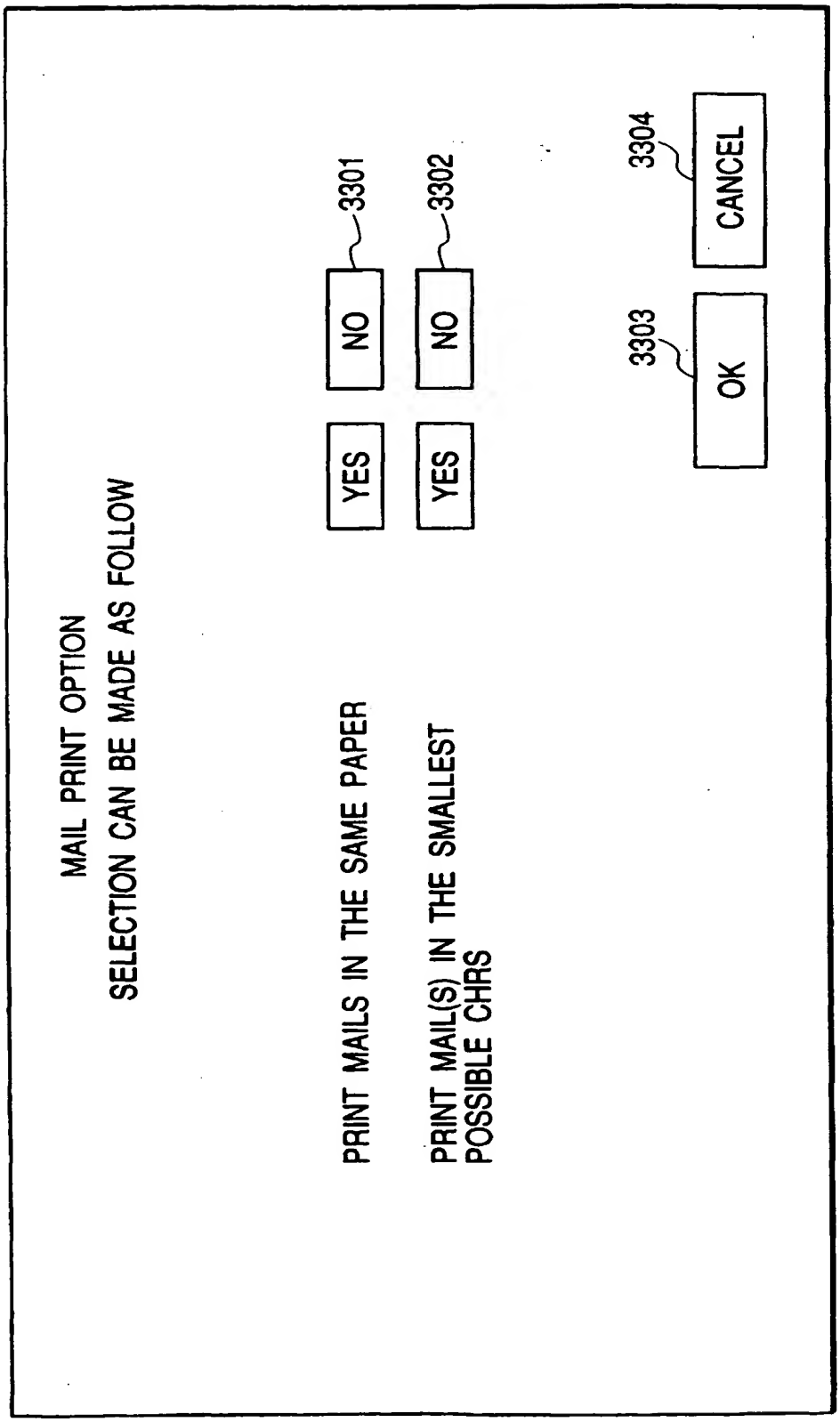

MAIL PRINT OPTION
SELECTION CAN BE MADE AS FOLLOW
PRINT MAILS IN THE SAME PAPER
YES
NO
3301
PRINT MAIL(S) IN THE SMALLEST POSSIBLE CHRS
YES
NO
3302
3303
OK
3304
CANCEL

FIG. 34

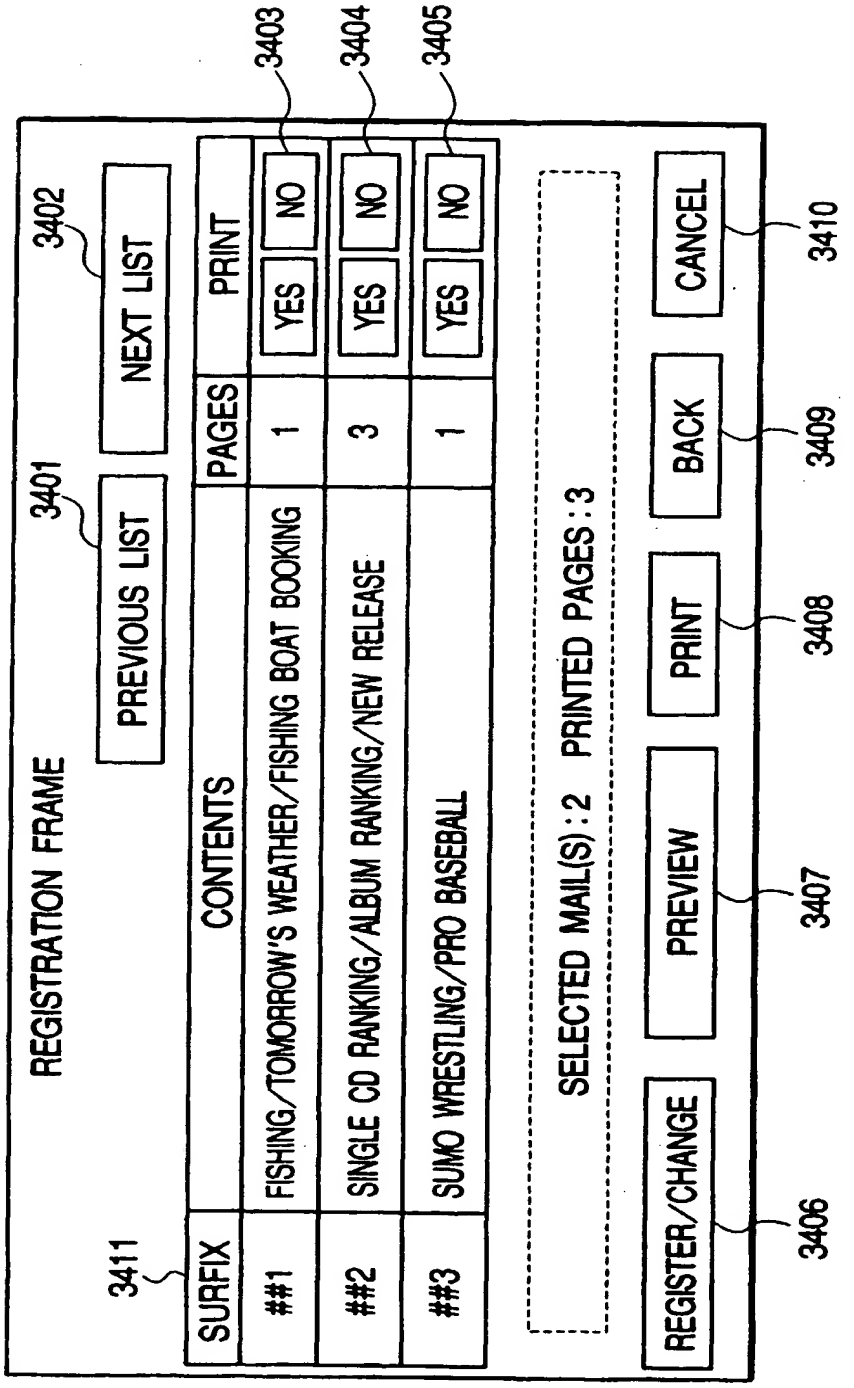

REGISTRATION FRAME
3401
3402
PREVIOUS LIST
NEXT LIST
3403
3404
3405
SURFIX
CONTENTS
PAGES
PRINT
##1
FISHING/TOMORROW'S WEATHER/FISHING BOAT BOOKING
1
YES
NO
##2
SINGLE CD RANKING/ALBUM RANKING/NEW RELEASE
3
YES
NO
##3
SUMO WRESTLING/PRO BASEBALL
1
YES
NO
3411
SELECTED MAIL(S):2 PRINTED PAGES:3
REGISTER/CHANGE
PREVIEW
PRINT
BACK
CANCEL
3406
3407
3408
3409
3410

FIG. 35

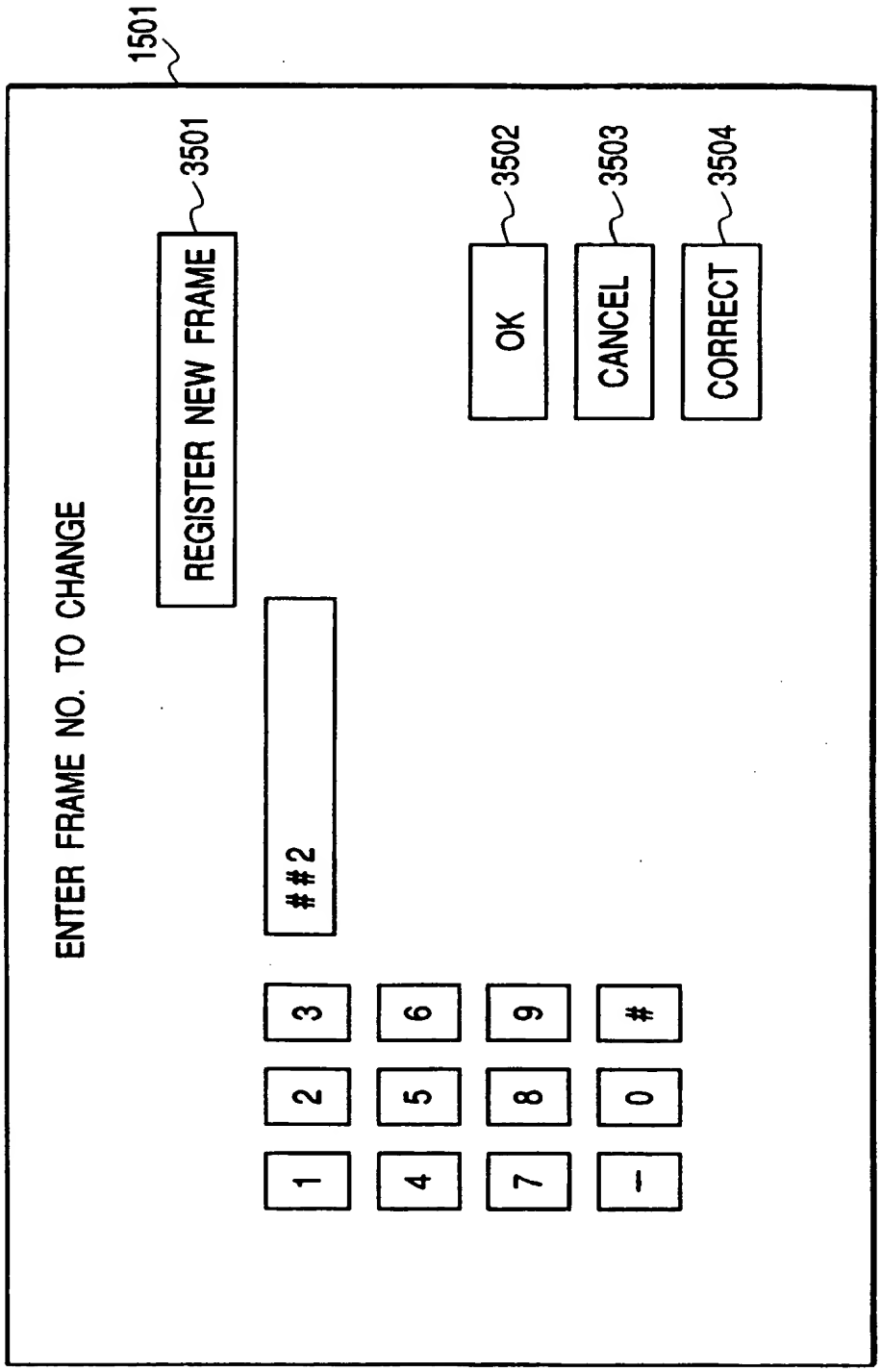

1501
ENTER FRAME NO. TO CHANGE
REGISTER NEW FRAME
3501
##2
OK
3502
CANCEL
3503
CORRECT
3504
1
2
3
4
5
6
7
8
9
-
0
#

FIG. 36

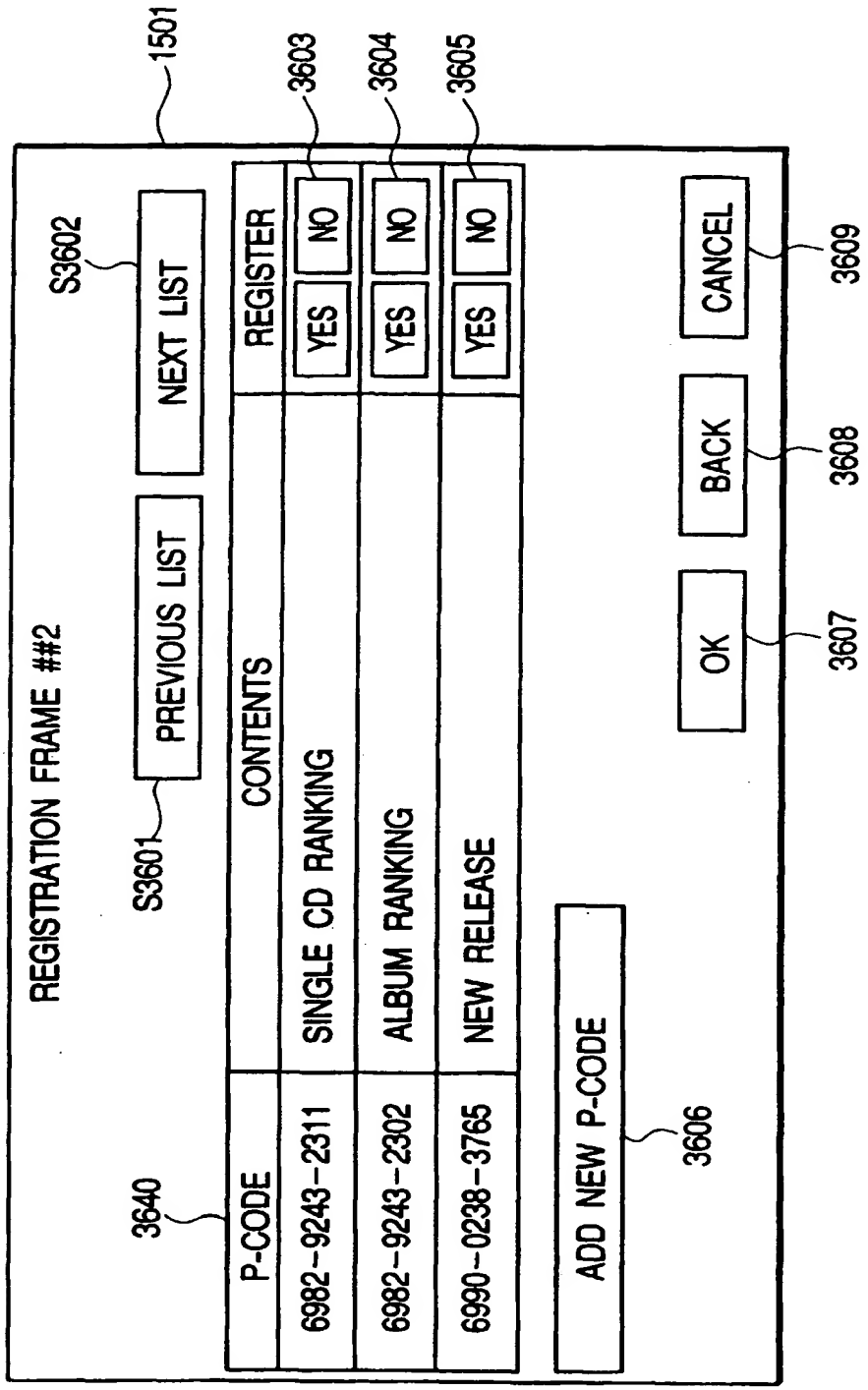

1501
REGISTRATION FRAME ##2
S3602
NEXT LIST
S3601
PREVIOUS LIST
3640
P-CODE
CONTENTS
REGISTER
3603
3604
3605
6982-9243-2311
SINGLE CD RANKING
6982-9243-2302
ALBUM RANKING
6990-0238-3765
NEW RELEASE
YES
NO
ADD NEW P-CODE
3606
OK
3607
BACK
3608
CANCEL
3609

FIG. 37

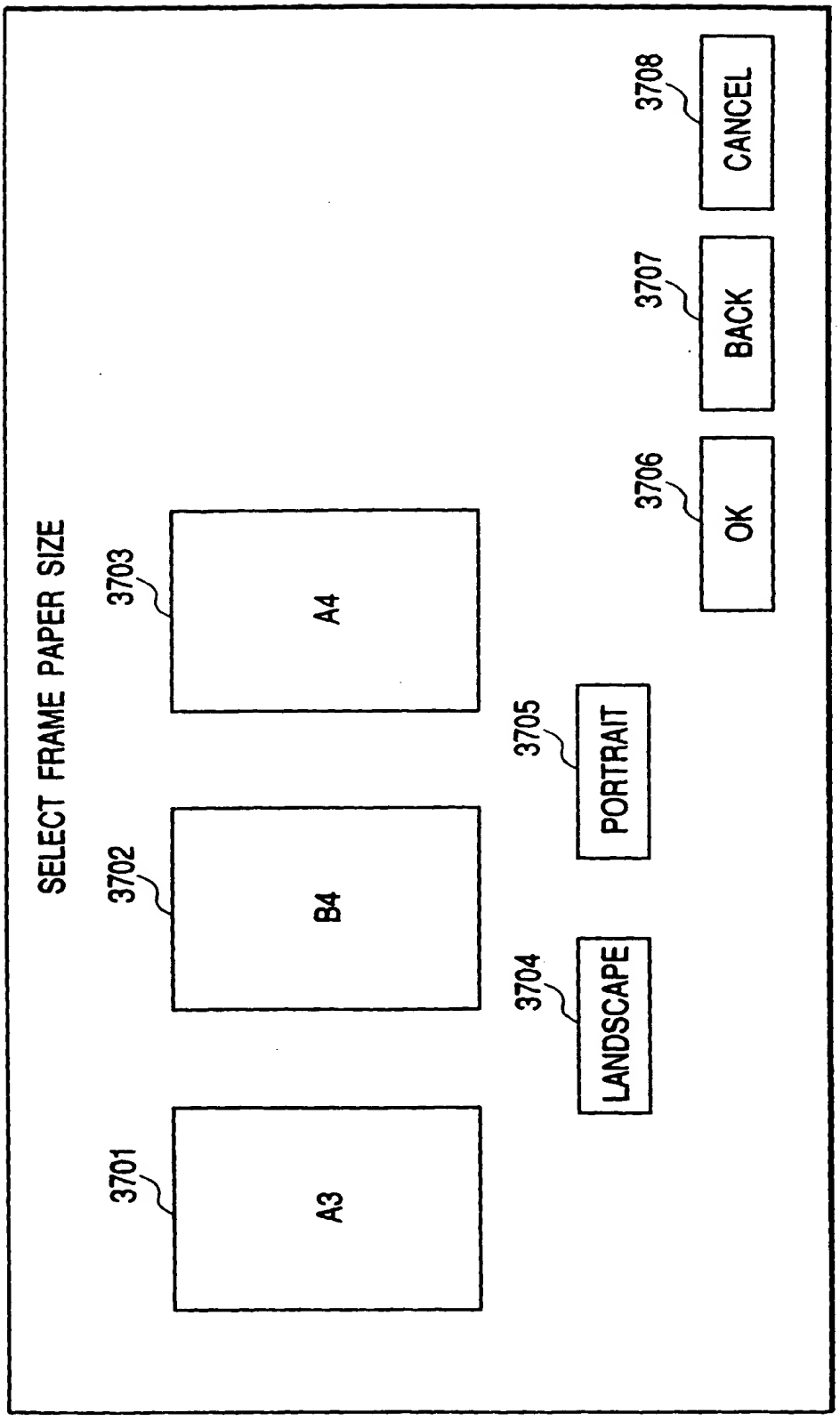

SELECT FRAME PAPER SIZE
3701
A3
3702
B4
3703
A4
3704
LANDSCAPE
3705
PORTRAIT
3706
OK
3707
BACK
3708
CANCEL

FIG. 38

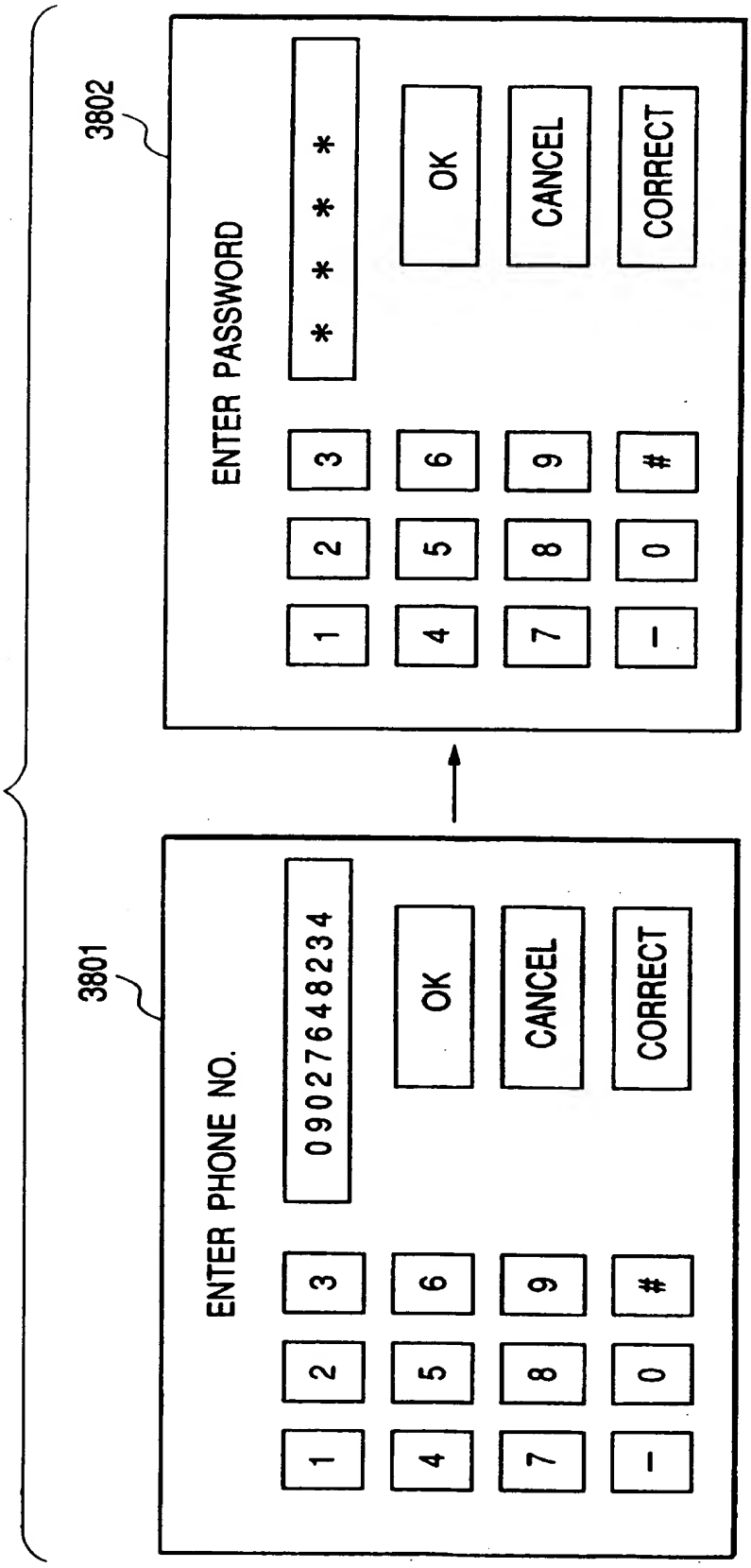

3801
ENTER PHONE NO.
09027648234
OK
CANCEL
CORRECT
1
2
3
4
5
6
7
8
9
–
0
#
3802
ENTER PASSWORD
* * * *
OK
CANCEL
CORRECT
1
2
3
4
5
6
7
8
9
–
0
#

FIG. 39

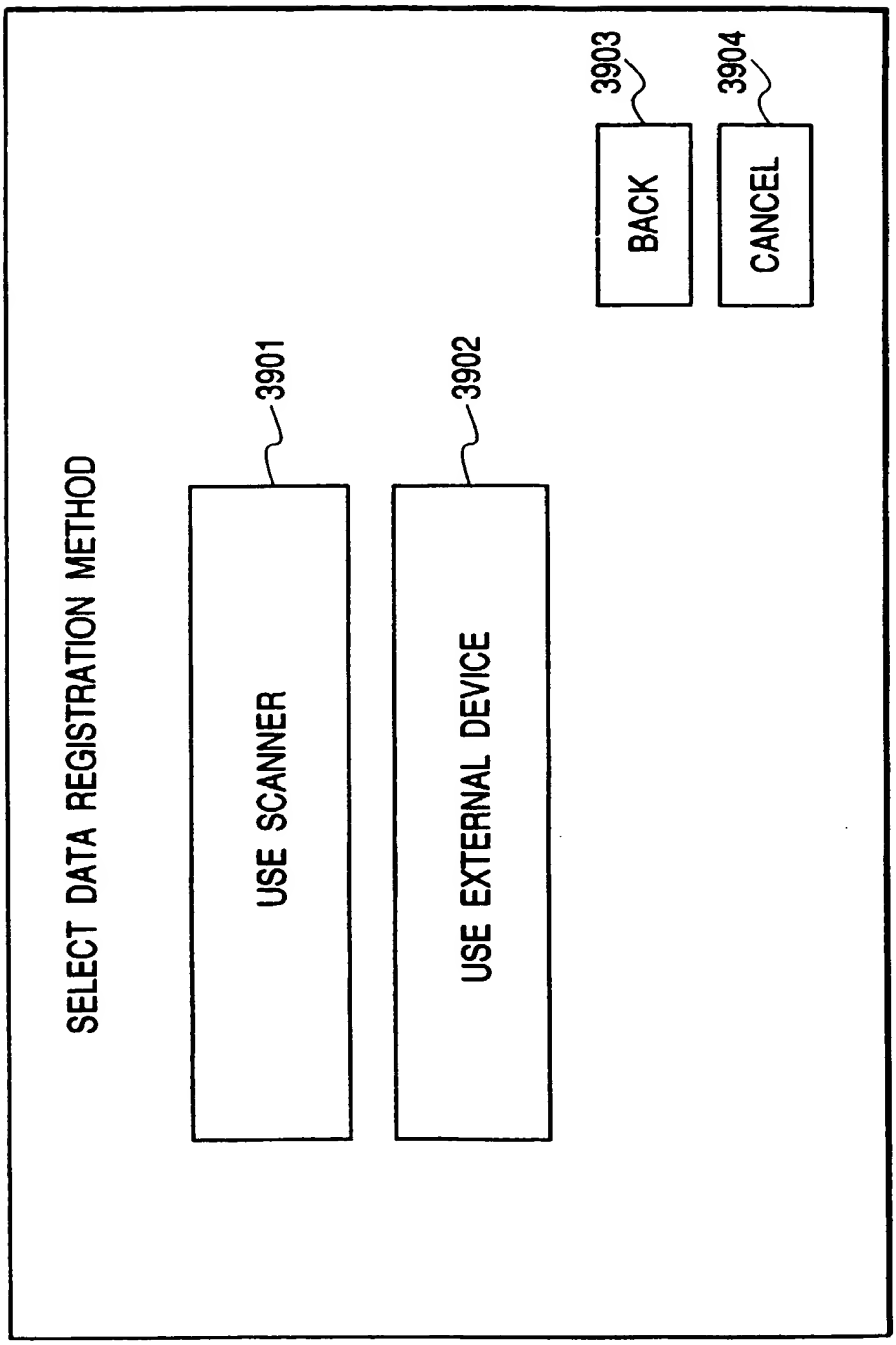

SELECT DATA REGISTRATION METHOD
USE SCANNER
3901
USE EXTERNAL DEVICE
3902
BACK
3903
CANCEL
3904

FIG. 40

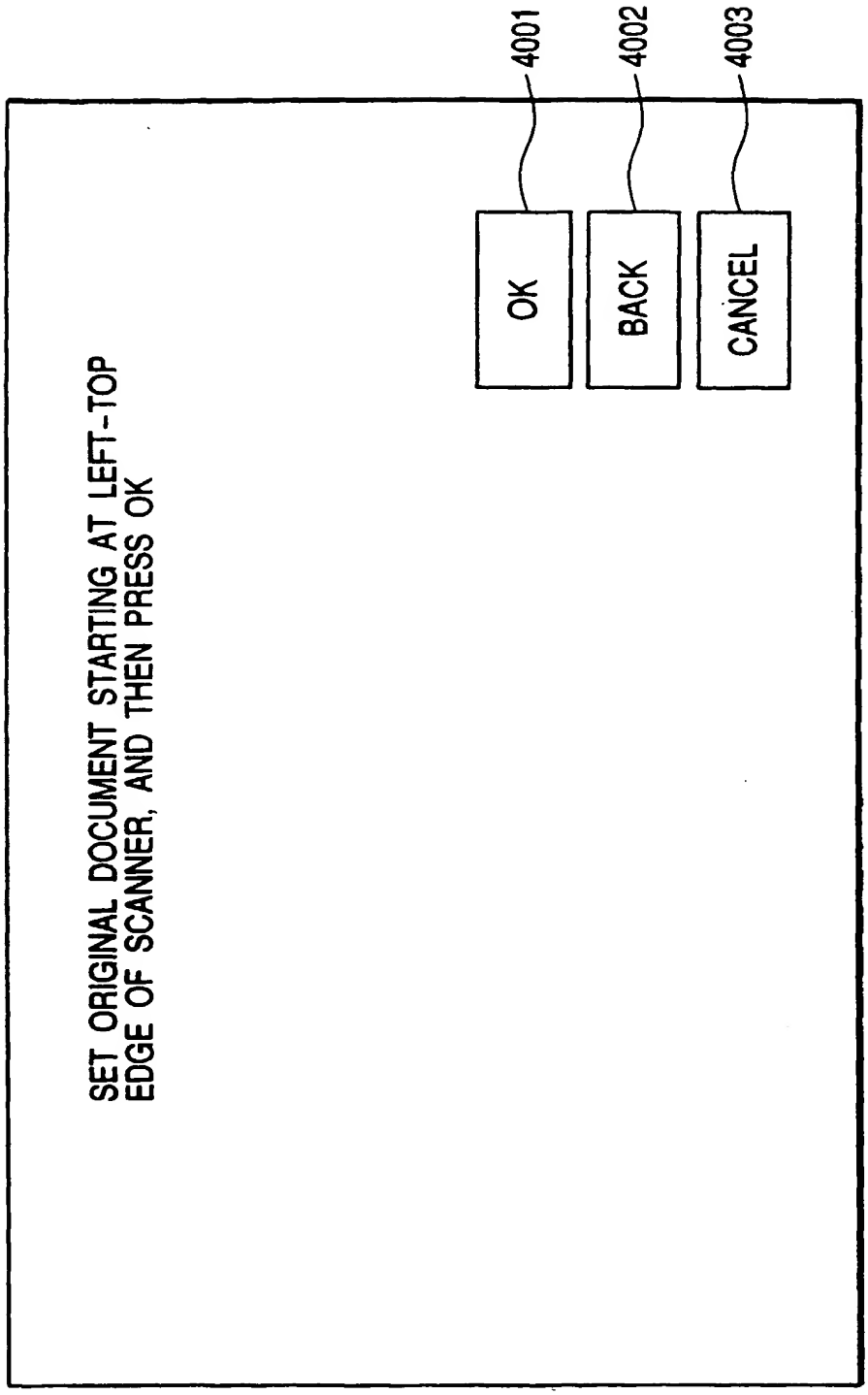

4001
4002
4003
OK
BACK
CANCEL
SET ORIGINAL DOCUMENT STARTING AT LEFT-TOP
EDGE OF SCANNER, AND THEN PRESS OK

FIG. 41

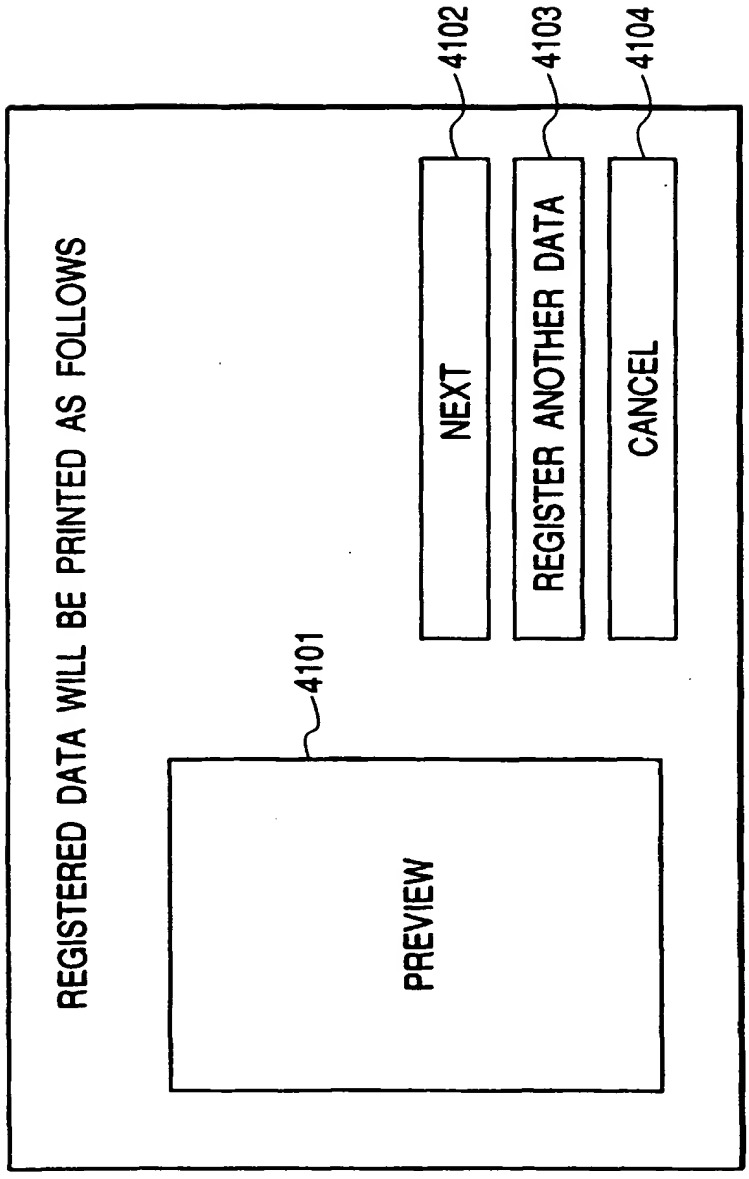

REGISTERED DATA WILL BE PRINTED AS FOLLOWS
PREVIEW
4101
NEXT
4102
REGISTER ANOTHER DATA
4103
CANCEL
4104

FIG. 42

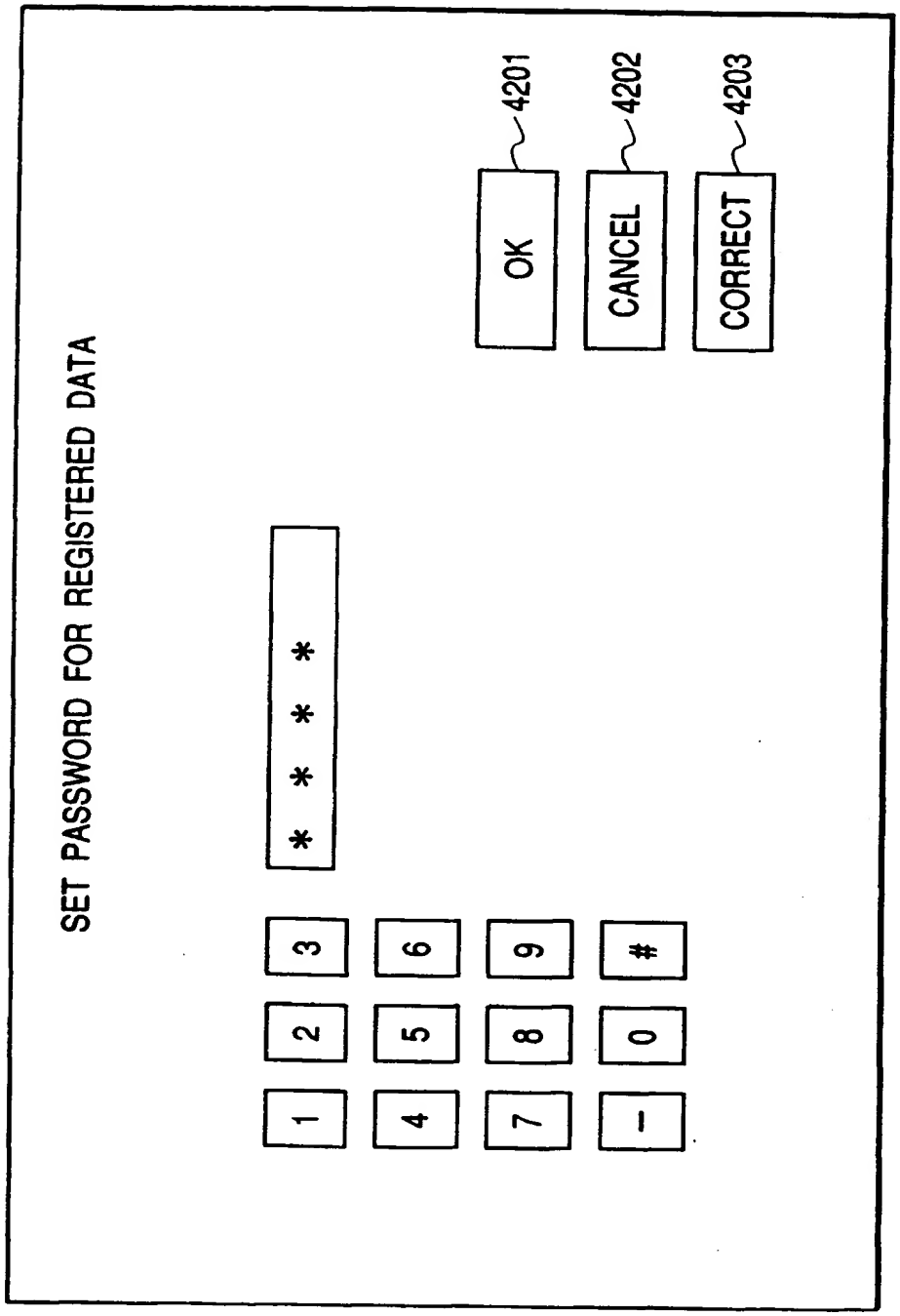

SET PASSWORD FOR REGISTERED DATA
* * * *
1
2
3
4
5
6
7
8
9
–
0
#
OK
CANCEL
CORRECT
4201
4202
4203

FIG. 43

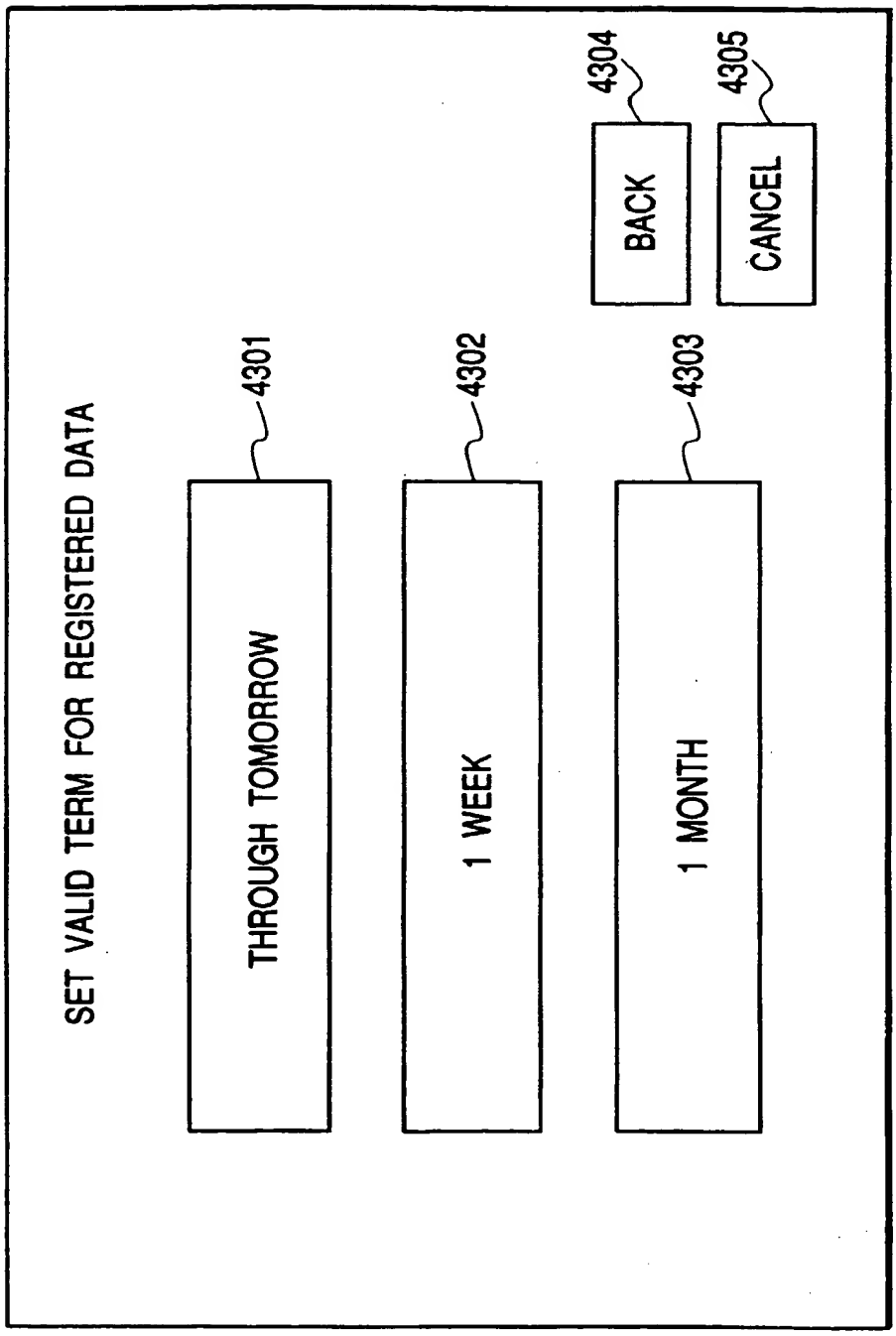

SET VALID TERM FOR REGISTERED DATA
THROUGH TOMORROW
1 WEEK
1 MONTH
BACK
CANCEL
4301
4302
4303
4304
4305

FIG. 44

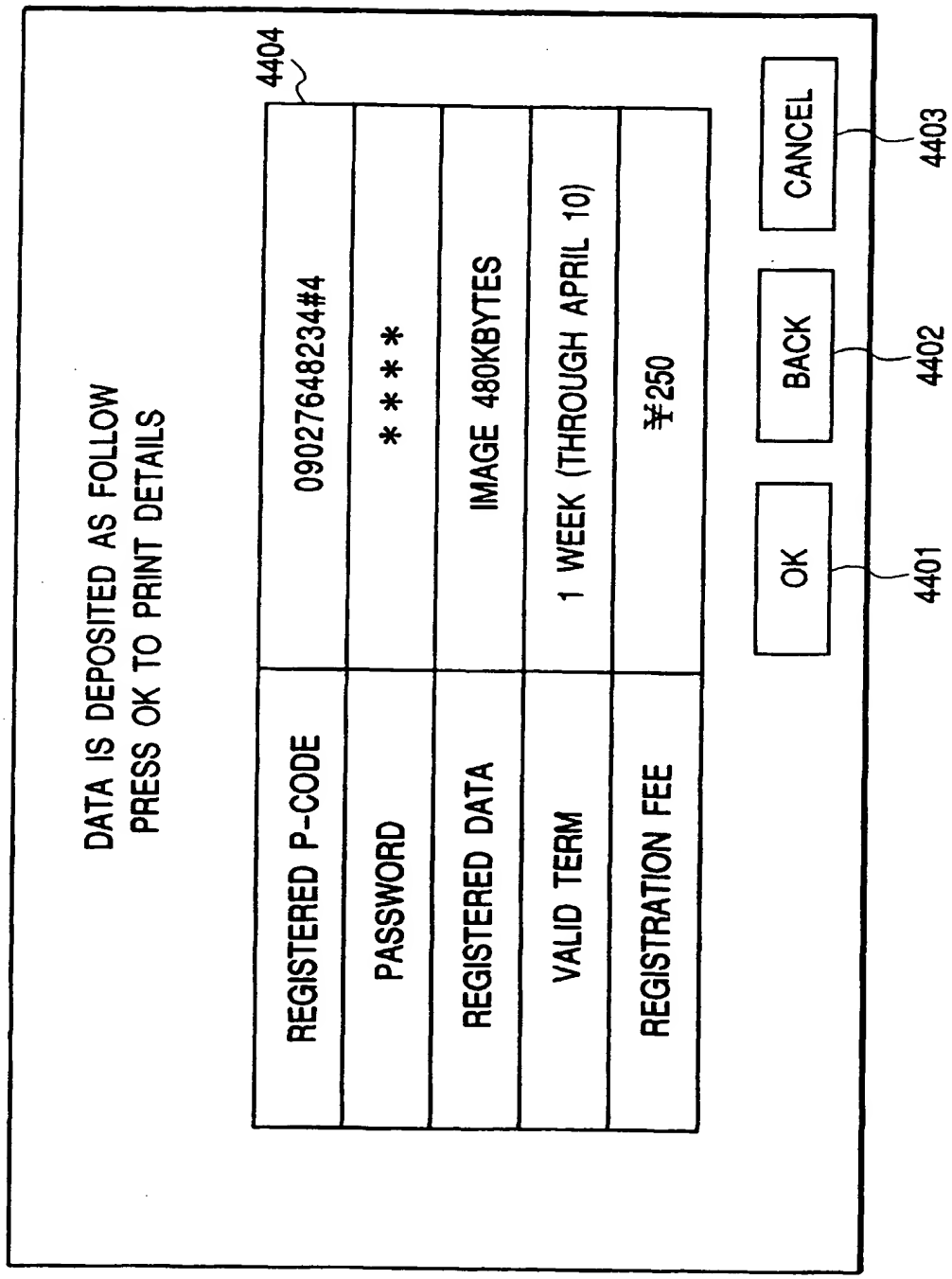

DATA IS DEPOSITED AS FOLLOW
PRESS OK TO PRINT DETAILS
4404
REGISTERED P-CODE
09027648234#4
PASSWORD
* * * *
REGISTERED DATA
IMAGE 480KBYTES
VALID TERM
1 WEEK (THROUGH APRIL 10)
REGISTRATION FEE
¥250
OK
4401
BACK
4402
CANCEL
4403

FIG. 45

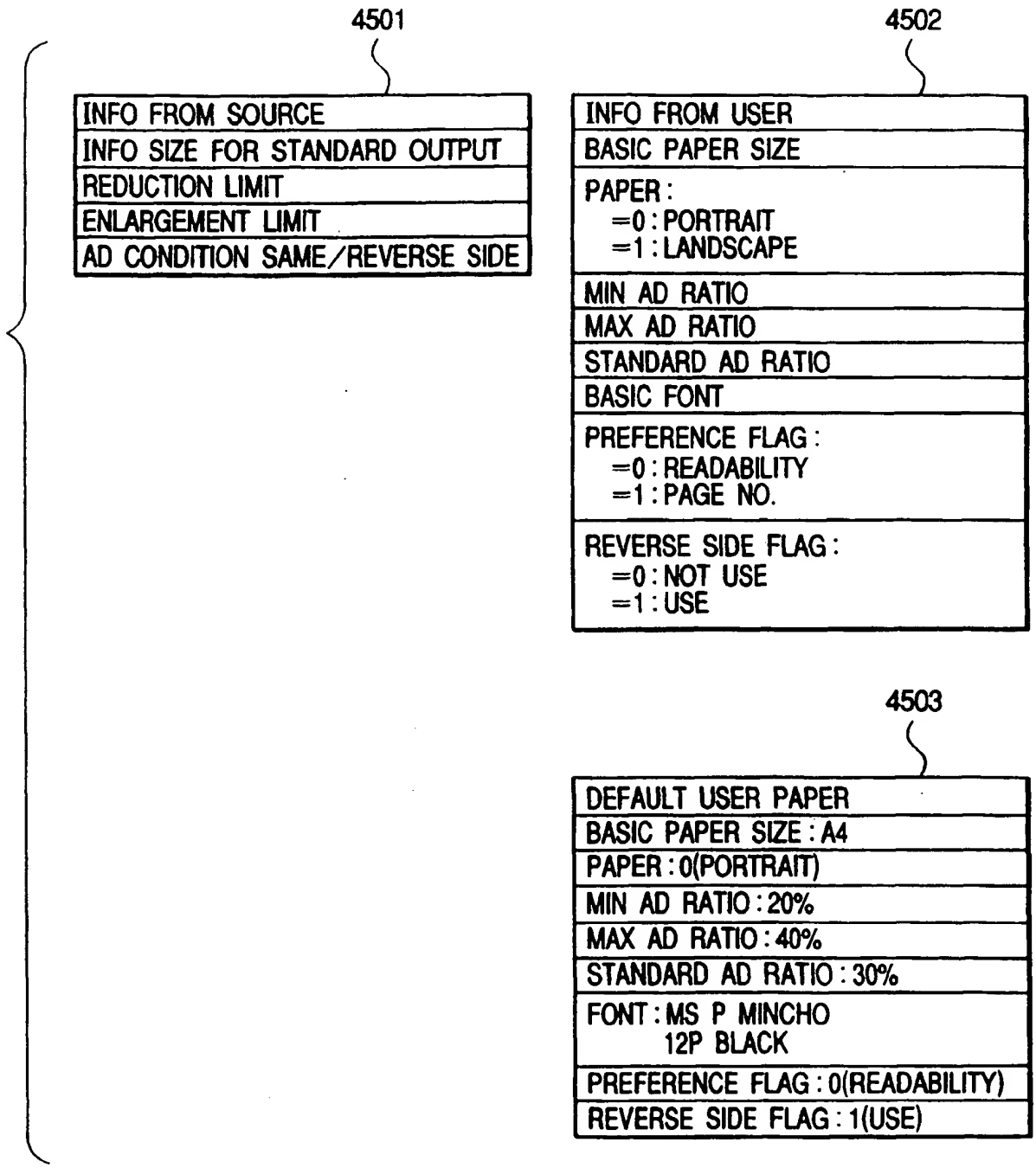

4501
INFO FROM SOURCE
INFO SIZE FOR STANDARD OUTPUT
REDUCTION LIMIT
ENLARGEMENT LIMIT
AD CONDITION SAME/REVERSE SIDE
4502
INFO FROM USER
BASIC PAPER SIZE
PAPER:
=0:PORTRAIT
=1:LANDSCAPE
MIN AD RATIO
MAX AD RATIO
STANDARD AD RATIO
BASIC FONT
PREFERENCE FLAG:
=0:READABILITY
=1:PAGE NO.
REVERSE SIDE FLAG:
=0:NOT USE
=1:USE
4503
DEFAULT USER PAPER
BASIC PAPER SIZE:A4
PAPER:0(PORTRAIT)
MIN AD RATIO:20%
MAX AD RATIO:40%
STANDARD AD RATIO:30%
FONT:MS P MINCHO
12P BLACK
PREFERENCE FLAG:0(READABILITY)
REVERSE SIDE FLAG:1(USE)

FIG. 46

4601

IP INFO TABLE

P-CODE	ID	PARENT CODE SUB-CODE FLAG SUB-CODE LINK	LINK P-CODE
	BASIC PROPERTY	OWNER ID (FIG. 51)	
		TITLE SUB-TITLE (SUMMARY) STATUS PRICE SIZE AD CONDITION PASSWORD STARTING DATE TERM CODE VALID TERM MAX ENLARGEMENT MIN REDUCTION GENRE SUB-GENRE AREA CODE KEYWORD LIST KEYWORD WEIGHT LIST	REGISTERED, AVAILABLE SUSPENDED, DISCONTINUED FOR AREA-BASED INFO
	FRAME INFO	P-CODE	
	NON-LINK INFO	P-CODE LINKED TO THIS INFO	
	REAL FILE INFO	NO. OF FILES FILE NAMES	

EP 1 045 323 A2

FIG. 47

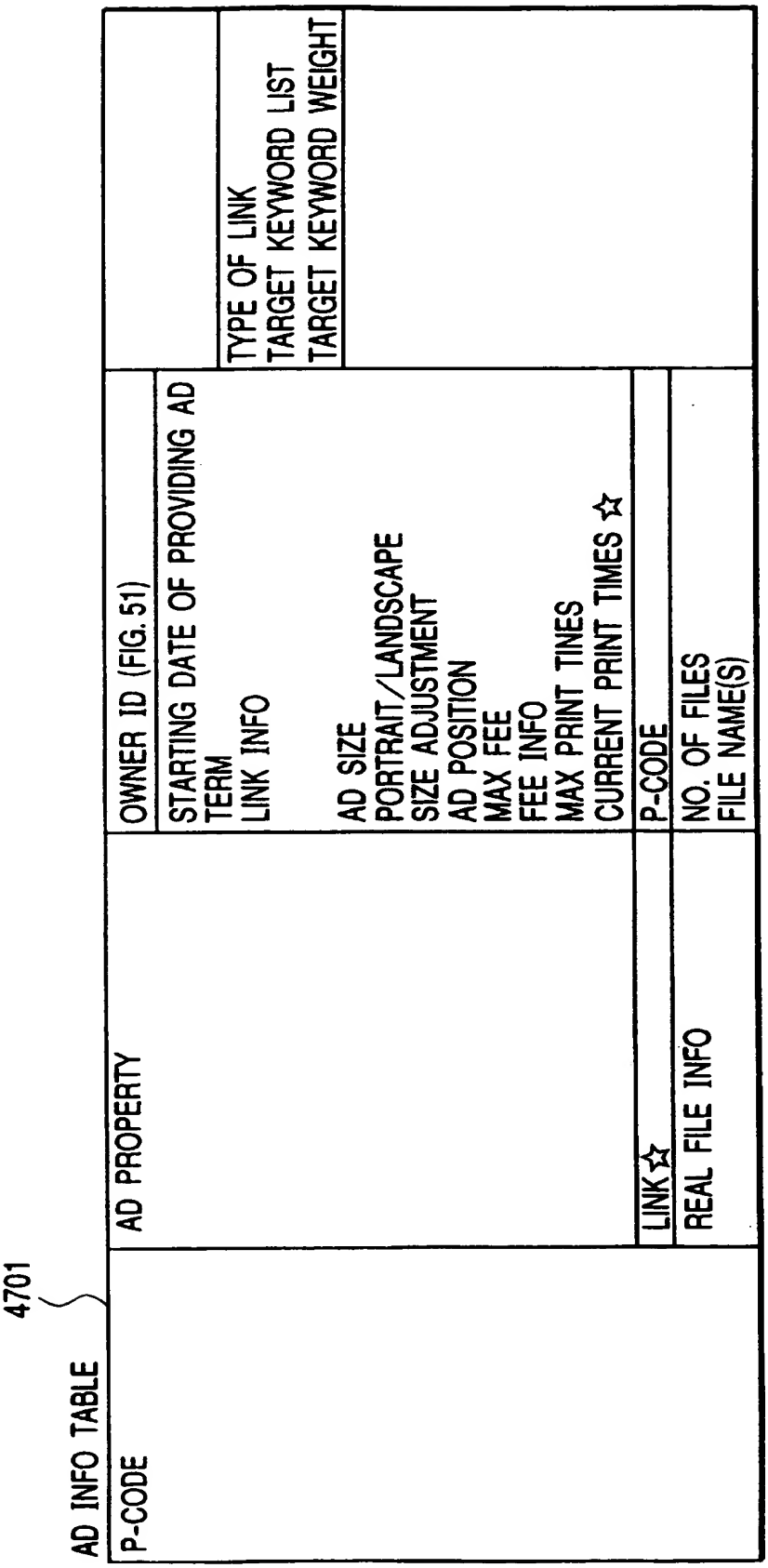

4701
AD INFO TABLE
P-CODE
AD PROPERTY
OWNER ID (FIG. 51)
STARTING DATE OF PROVIDING AD
TERM
LINK INFO
AD SIZE
PORTRAIT/LANDSCAPE
SIZE ADJUSTMENT
AD POSITION
MAX FEE
FEE INFO
MAX PRINT TINES
CURRENT PRINT TIMES ☆
TYPE OF LINK
TARGET KEYWORD LIST
TARGET KEYWORD WEIGHT
LINK☆
P-CODE
REAL FILE INFO
NO. OF FILES
FILE NAME(S)

FIG. 48

FIG. 48A

FIG. 48A
FIG. 48B

4801

USER INFO TABLE

USER P-CODE (PHONE NO.)	USER PROFILE	∓ ADDRESS SERVICE TYPE COMPANY NAME TYPE-OF-INDUSTRY ID TYPE OF INDUSTRY (OTHERS) SECTION TITLE JOB PRINT SHEET	
			LAYOUT PRIORITY PAPER SIZE PAPER DIRECTION AD
		DATE OF BIRTH BLOOD TYPE SEX EDUCATION JOB ID JOB (OTHERS) MARRIED NO. OF FAMILY MEMBERS INCOME SAVINGS ESTATE CAR DISPLACEMENT CAR TYPE MOTORCYCLE DISPLACEMENT CYCLE TYPE	

TO FIG. 48B

FIG. 48B

FROM FIG. 48A

		PET (OWNED) PET (WANTED) HOBBY MUSIC MOVIE SPORT (WATCH) SPORT (DO) FISHING FAVORITE GENRE
	PERSONAL INFO TABLE	USER ID TO ANOTHER DB (FIG. 50)
	MAIL SERVICE INFO	NO. OF MAILES MAX ENLARGEMENT MIN REDUCTION P-CODE LIST
	DELIVERY SERVICE INFO	NO. OF REGISTERED DATA P-CODE LIST
	PERSONAL P-CODE SERVICE INFO	NO. OF REGISTERED DATA P-CODE LIST

MAIL SERVICE P-CODE TABLE

P-CODE (PHONE NO./#NO.)	MAIL PROPERTY	SUBJECT SENDER SENDING DATE
	REAL FILE INFO	NO. OF FILES FILE NAME(S)

4802

DELIVERY SERVICE P-CODE TABLE

P-CODE (PHONE NO./-NO.)	INFO PROPERTY	TITLE ※ REGISTRATION DATE VALID TERM PASSWORD
	REAL FILE INFO	NO. OF FILES FILE NAME(S)

4803

FIG. 49

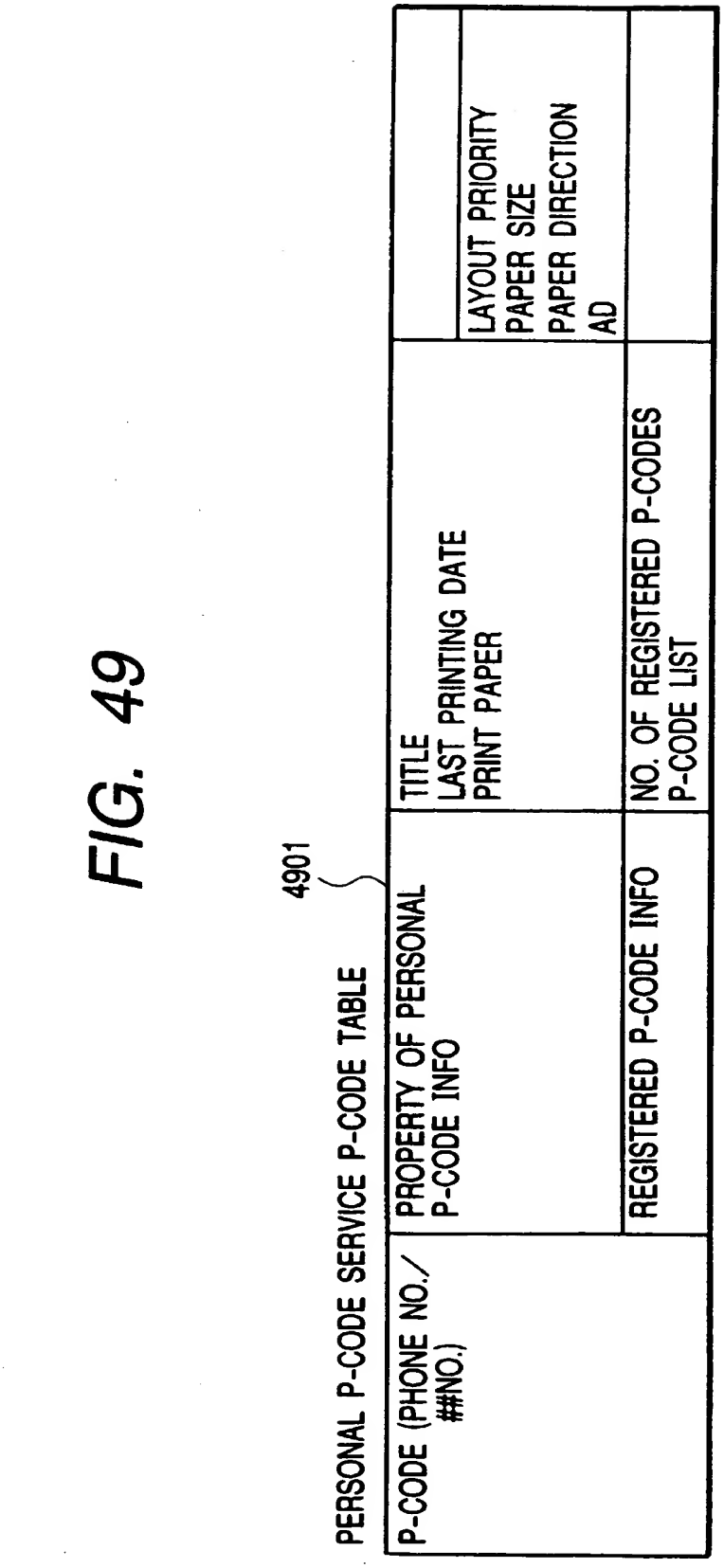

4901
PERSONAL P-CODE SERVICE P-CODE TABLE
P-CODE (PHONE NO./ ##NO.)
PROPERTY OF PERSONAL P-CODE INFO
TITLE
LAST PRINTING DATE
PRINT PAPER
LAYOUT PRIORITY
PAPER SIZE
PAPER DIRECTION
AD
REGISTERED P-CODE INFO
NO. OF REGISTERED P-CODES
P-CODE LIST

FIG. 50

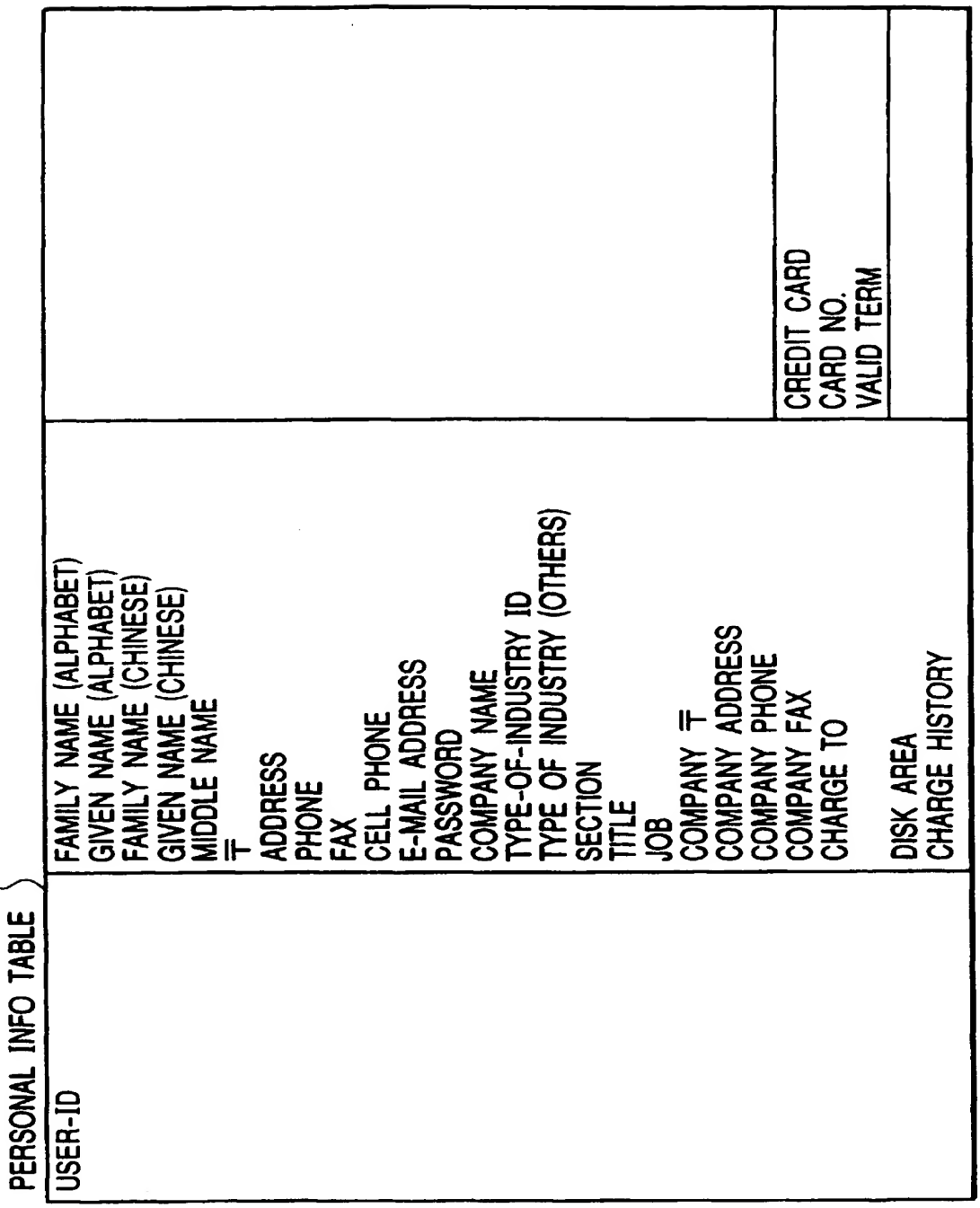

5001
PERSONAL INFO TABLE
USER-ID
FAMILY NAME (ALPHABET)
GIVEN NAME (ALPHABET)
FAMILY NAME (CHINESE)
GIVEN NAME (CHINESE)
MIDDLE NAME
〒
ADDRESS
PHONE
FAX
CELL PHONE
E-MAIL ADDRESS
PASSWORD
COMPANY NAME
TYPE-OF-INDUSTRY ID
TYPE OF INDUSTRY (OTHERS)
SECTION
TITLE
JOB
COMPANY 〒
COMPANY ADDRESS
COMPANY PHONE
COMPANY FAX
CHARGE TO
DISK AREA
CHARGE HISTORY
CREDIT CARD
CARD NO.
VALID TERM

FIG. 51

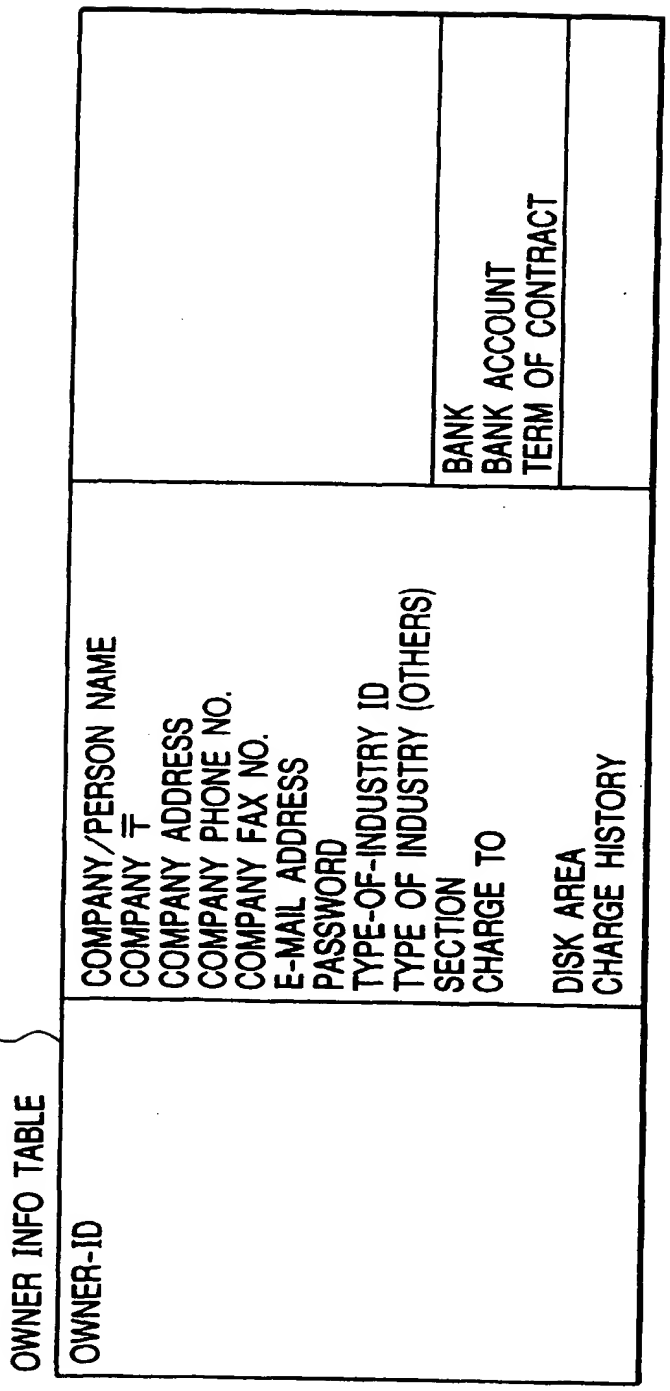

5101
OWNER INFO TABLE
OWNER-ID
COMPANY/PERSON NAME
COMPANY 〒
COMPANY ADDRESS
COMPANY PHONE NO.
COMPANY FAX NO.
E-MAIL ADDRESS
PASSWORD
TYPE-OF-INDUSTRY ID
TYPE OF INDUSTRY (OTHERS)
SECTION
CHARGE TO
DISK AREA
CHARGE HISTORY
BANK
BANK ACCOUNT
TERM OF CONTRACT

FIG. 52

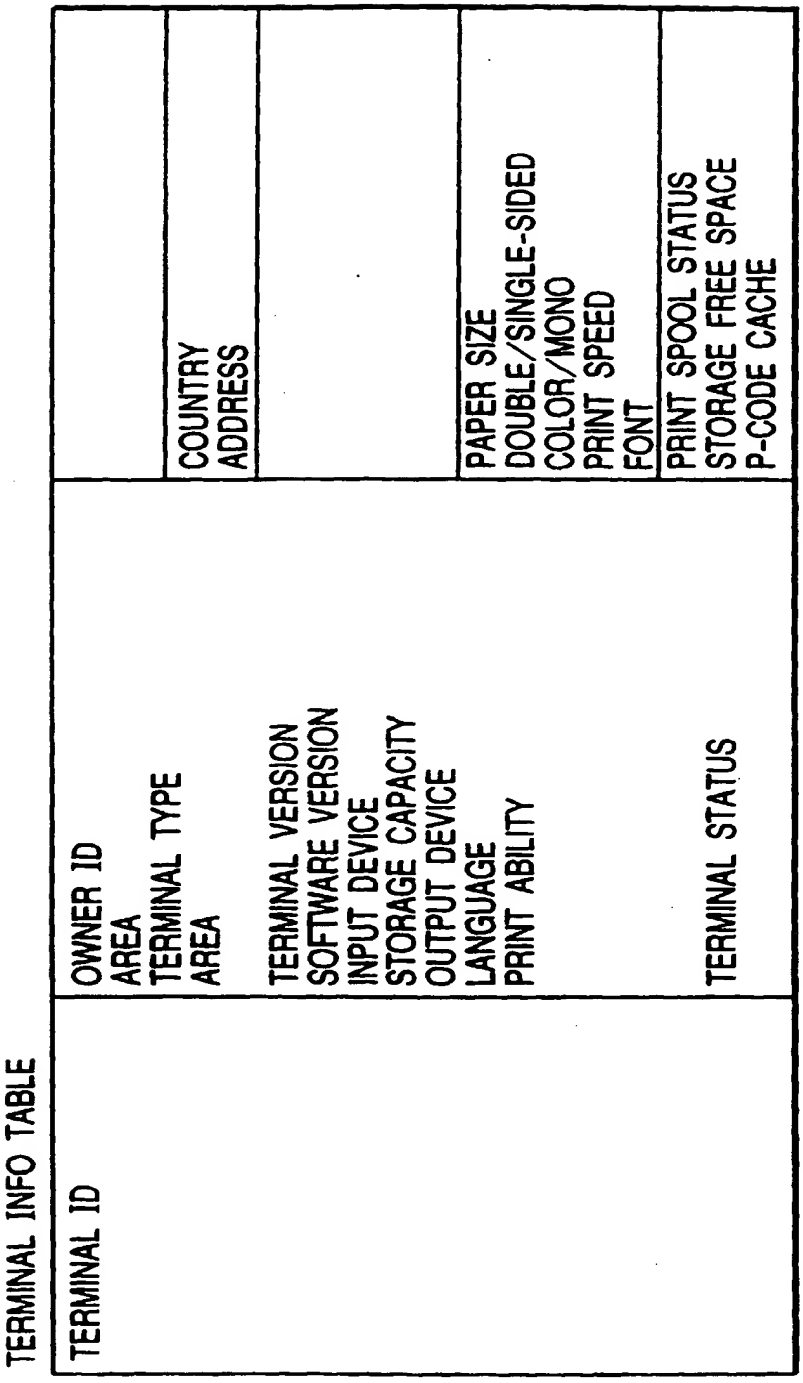

TERMINAL INFO TABLE
TERMINAL ID
OWNER ID
AREA
TERMINAL TYPE
AREA
TERMINAL VERSION
SOFTWARE VERSION
INPUT DEVICE
STORAGE CAPACITY
OUTPUT DEVICE
LANGUAGE
PRINT ABILITY
TERMINAL STATUS
COUNTRY
ADDRESS
PAPER SIZE
DOUBLE/SINGLE-SIDED
COLOR/MONO
PRINT SPEED
FONT
PRINT SPOOL STATUS
STORAGE FREE SPACE
P-CODE CACHE

FIG. 53

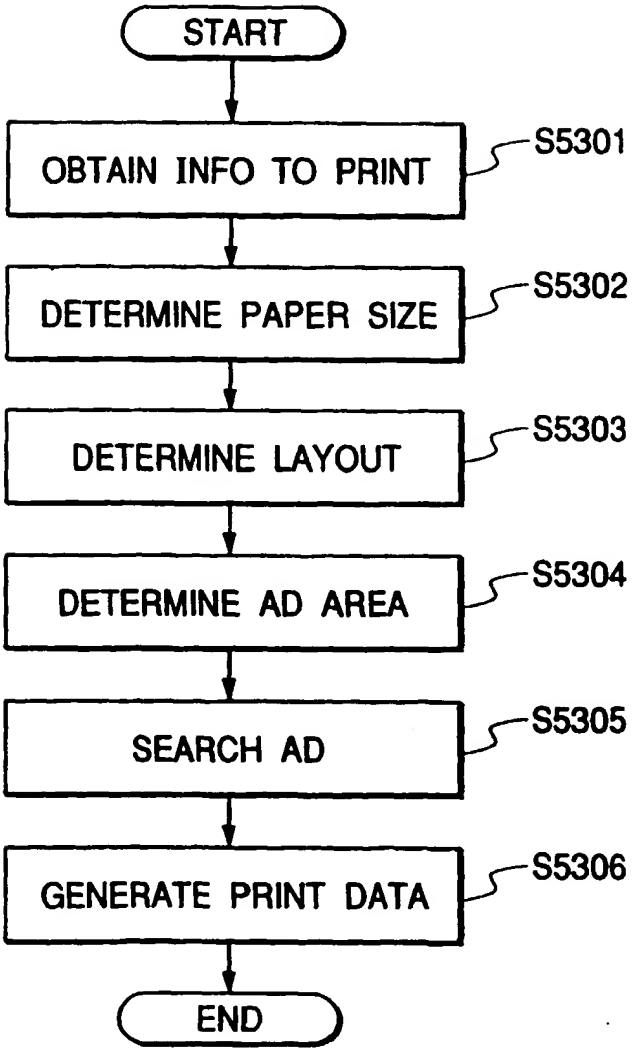

START
OBTAIN INFO TO PRINT
S5301
DETERMINE PAPER SIZE
S5302
DETERMINE LAYOUT
S5303
DETERMINE AD AREA
S5304
SEARCH AD
S5305
GENERATE PRINT DATA
S5306
END

FIG. 54

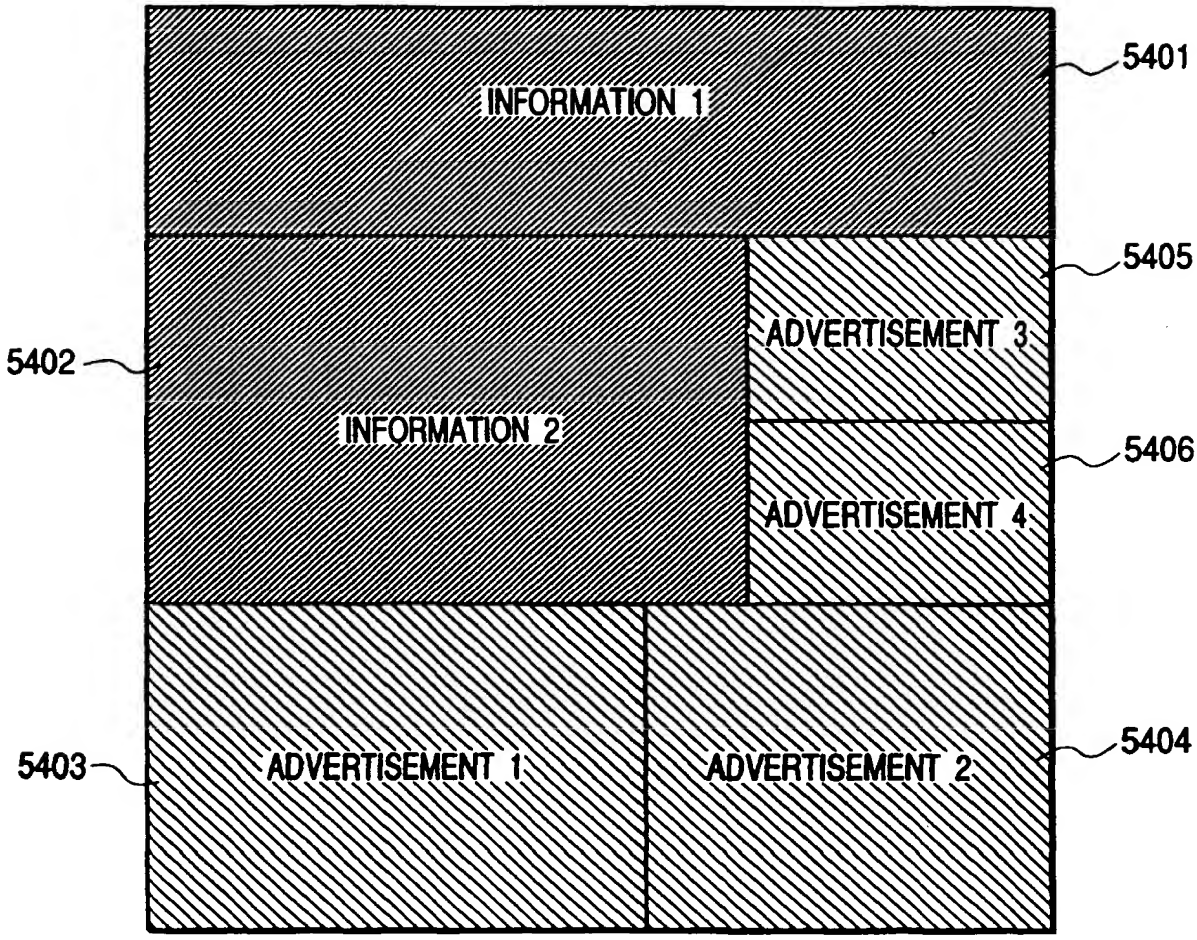
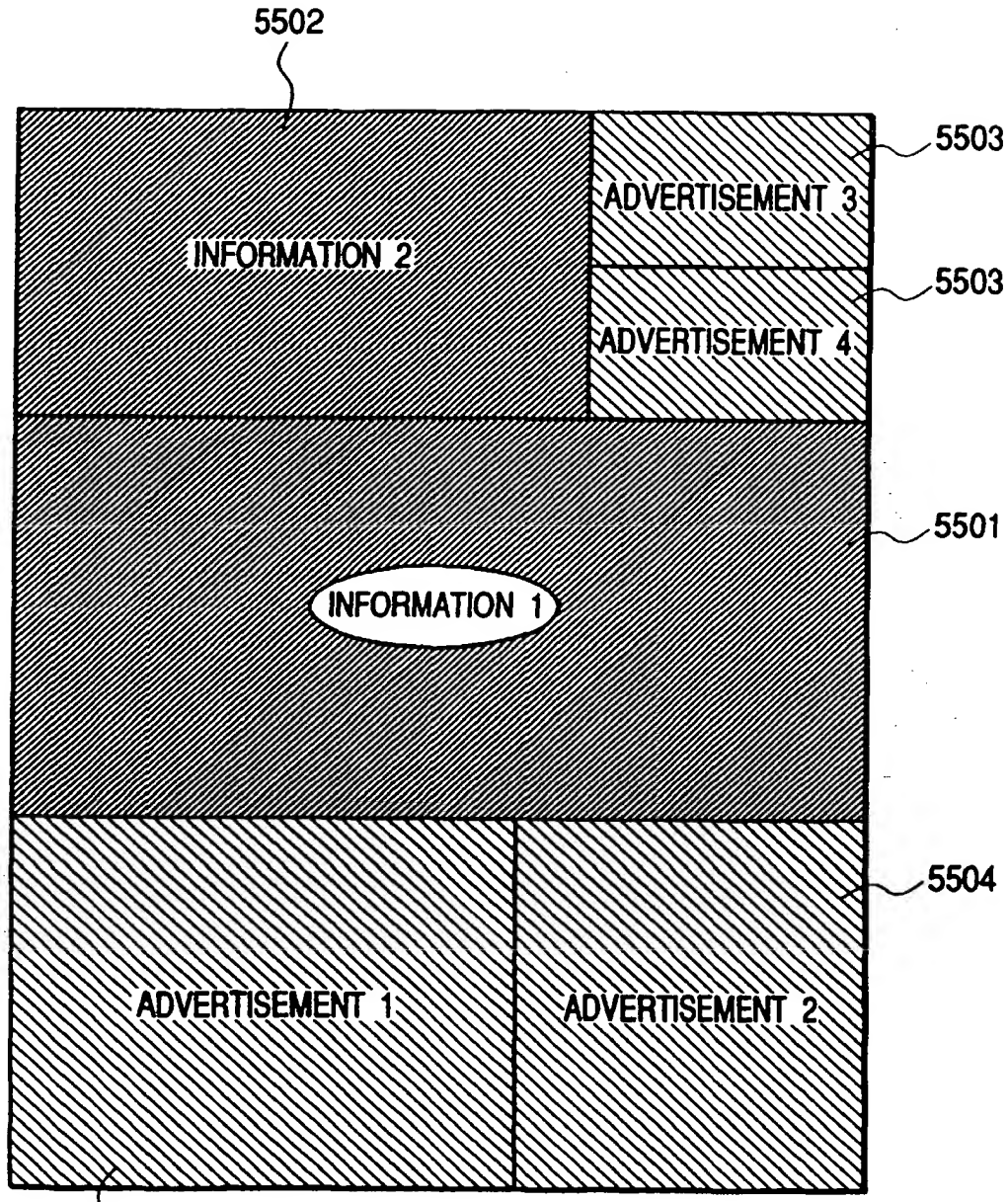

INFORMATION 1
5401
5405
ADVERTISEMENT 3
5402
INFORMATION 2
5406
ADVERTISEMENT 4
5403
ADVERTISEMENT 1
ADVERTISEMENT 2
5404

FIG. 55



ADVERTISEMENT 1 : 10×20
ADVERTISEMENT 2 : 10×10
ADVERTISEMENT 3 : 5×10
ADVERTISEMENT 4 : 5×10

FIG. 56

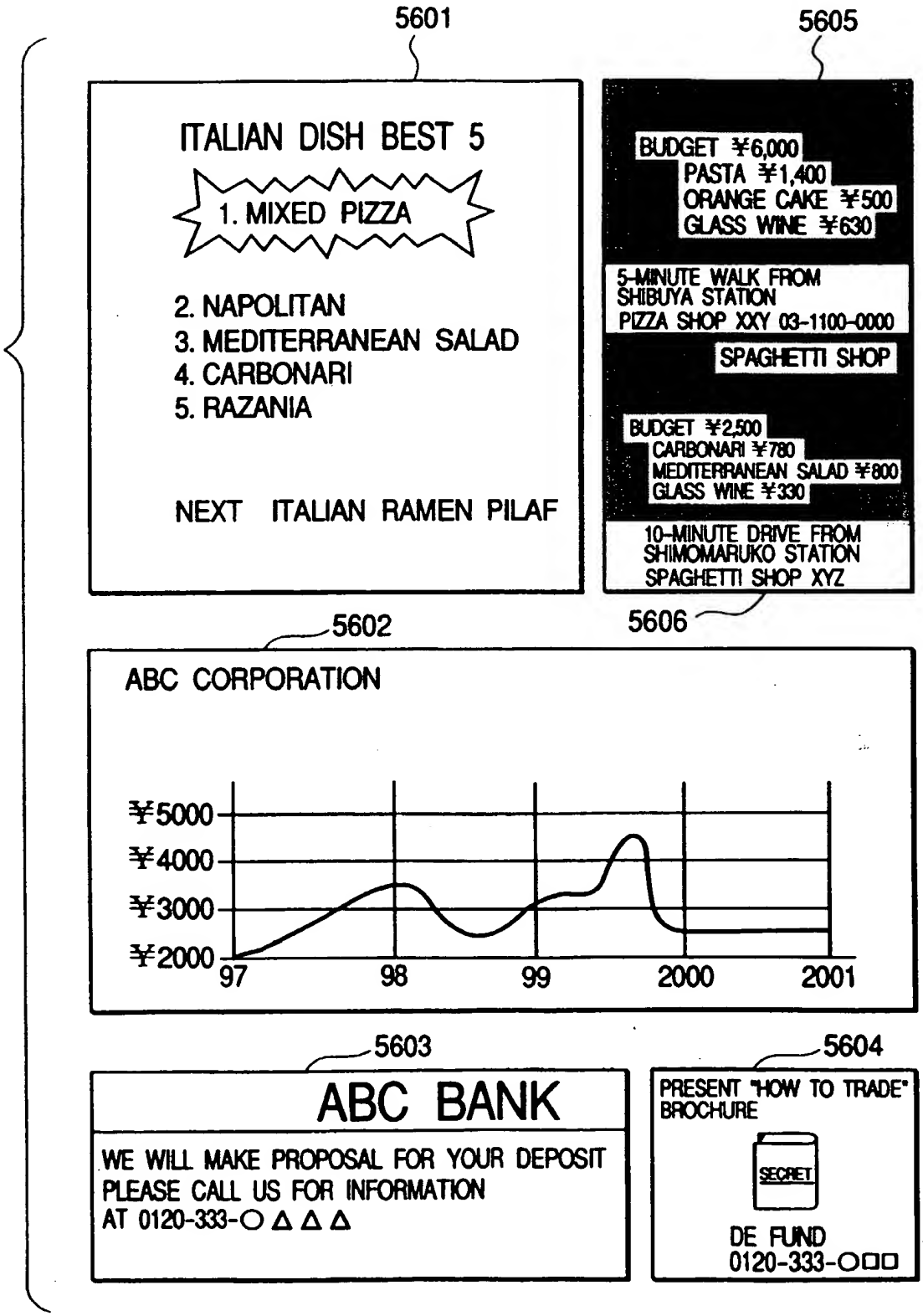

5601
ITALIAN DISH BEST 5
1. MIXED PIZZA
2. NAPOLITAN
3. MEDITERRANEAN SALAD
4. CARBONARI
5. RAZANIA
NEXT ITALIAN RAMEN PILAF
5605
BUDGET ¥6,000
PASTA ¥1,400
ORANGE CAKE ¥500
GLASS WINE ¥630
5-MINUTE WALK FROM
SHIBUYA STATION
PIZZA SHOP XXY 03-1100-0000
SPAGHETTI SHOP
BUDGET ¥2,500
CARBONARI ¥780
MEDITERRANEAN SALAD ¥800
GLASS WINE ¥330
10-MINUTE DRIVE FROM
SHIMOMARUKO STATION
SPAGHETTI SHOP XYZ
5606
5602
ABC CORPORATION
¥5000
¥4000
¥3000
¥2000
97
98
99
2000
2001
5603
ABC BANK
WE WILL MAKE PROPOSAL FOR YOUR DEPOSIT
PLEASE CALL US FOR INFORMATION
AT 0120-333-○ △ △ △
5604
PRESENT "HOW TO TRADE"
BROCHURE
SECRET
DE FUND
0120-333-○□□

FIG. 57

P-CODE	KEYWORD	KEYWORD WEIGHT
6943-4840-3928	ITALIAN DISHES	10
	RANKING	8
4343-2325-1199	ABC CORP.	5
	STOCK PRICE	8
	FINANCE	7

5701

KEYWORD	KEYWORD WEIGHT
SHIBUYA	10
TOKYO	4

5702

KEYWORD LIST FOR SEARCH	PRIORITY
ARTICLE	10
PERSONAL	6
TERMINAL	5

5703

AD P-CODE	MATCH COUNT
4395-3230-2333	80
4545-6787-6666	60
9860-1114-0900	55
5406-4984-4444	20

5704

FIG. 58

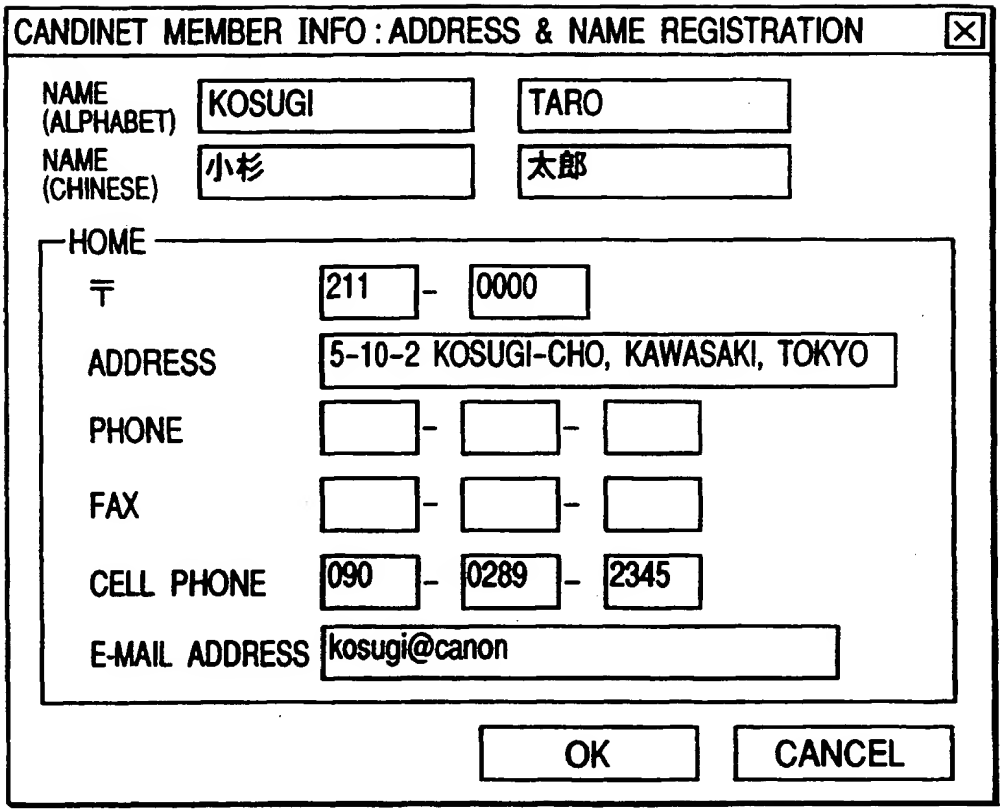

CANDINET MEMBER INFO : ADDRESS & NAME REGISTRATION
NAME (ALPHABET)
KOSUGI
TARO
NAME (CHINESE)
小杉
太郎
HOME
〒
211
0000
ADDRESS
5-10-2 KOSUGI-CHO, KAWASAKI, TOKYO
PHONE
FAX
CELL PHONE
090
0289
2345
E-MAIL ADDRESS
kosugi@canon
OK
CANCEL

FIG. 59

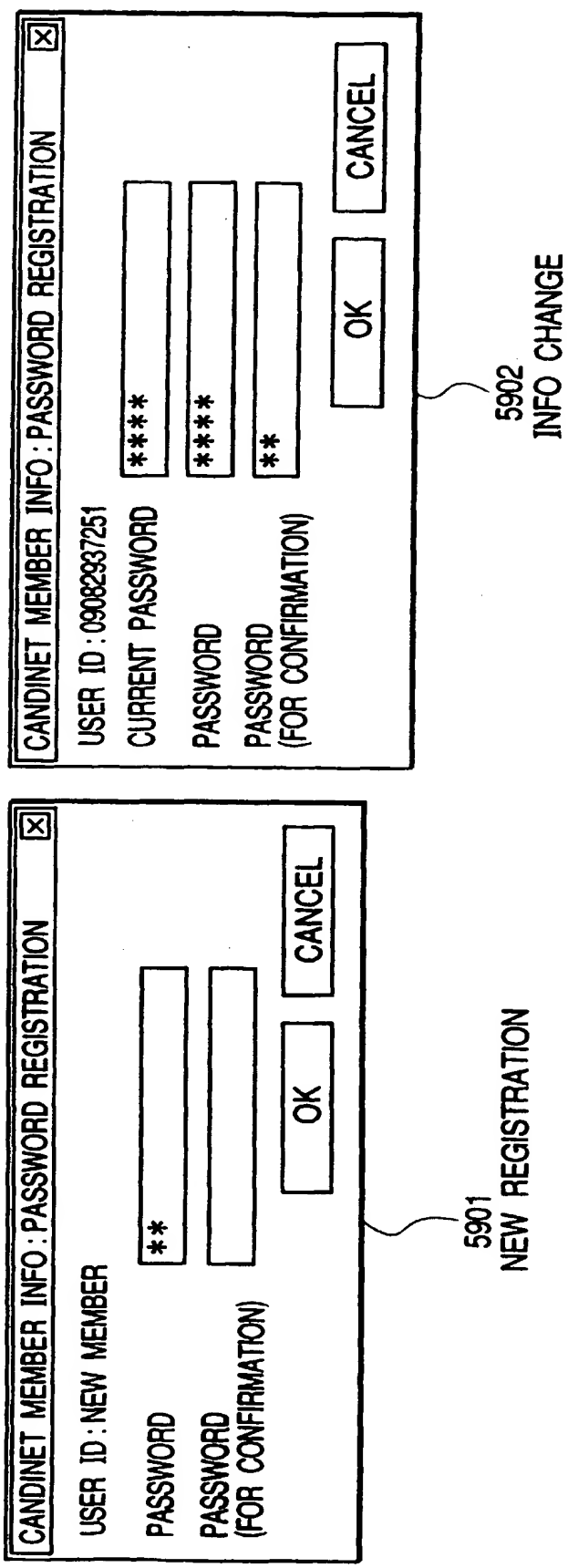

CANDINET MEMBER INFO : PASSWORD REGISTRATION
USER ID : NEW MEMBER
PASSWORD
**
PASSWORD
(FOR CONFIRMATION)
OK
CANCEL
5901
NEW REGISTRATION
CANDINET MEMBER INFO : PASSWORD REGISTRATION
USER ID : 09082937251
CURRENT PASSWORD
****
PASSWORD
****
PASSWORD
(FOR CONFIRMATION)
**
OK
CANCEL
5902
INFO CHANGE

FIG. 60

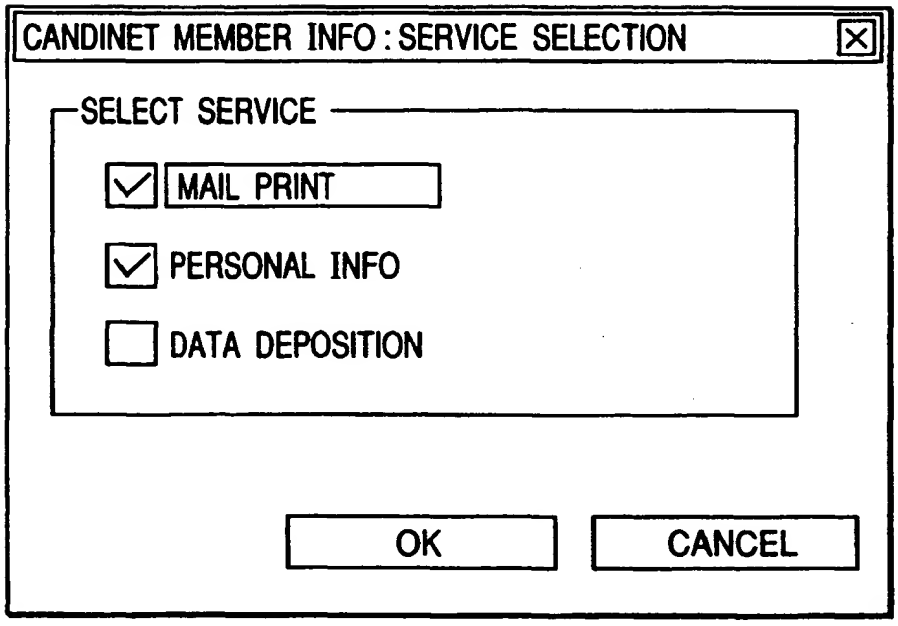

CANDINET MEMBER INFO : SERVICE SELECTION
SELECT SERVICE
MAIL PRINT
PERSONAL INFO
DATA DEPOSITION
OK
CANCEL

FIG. 61

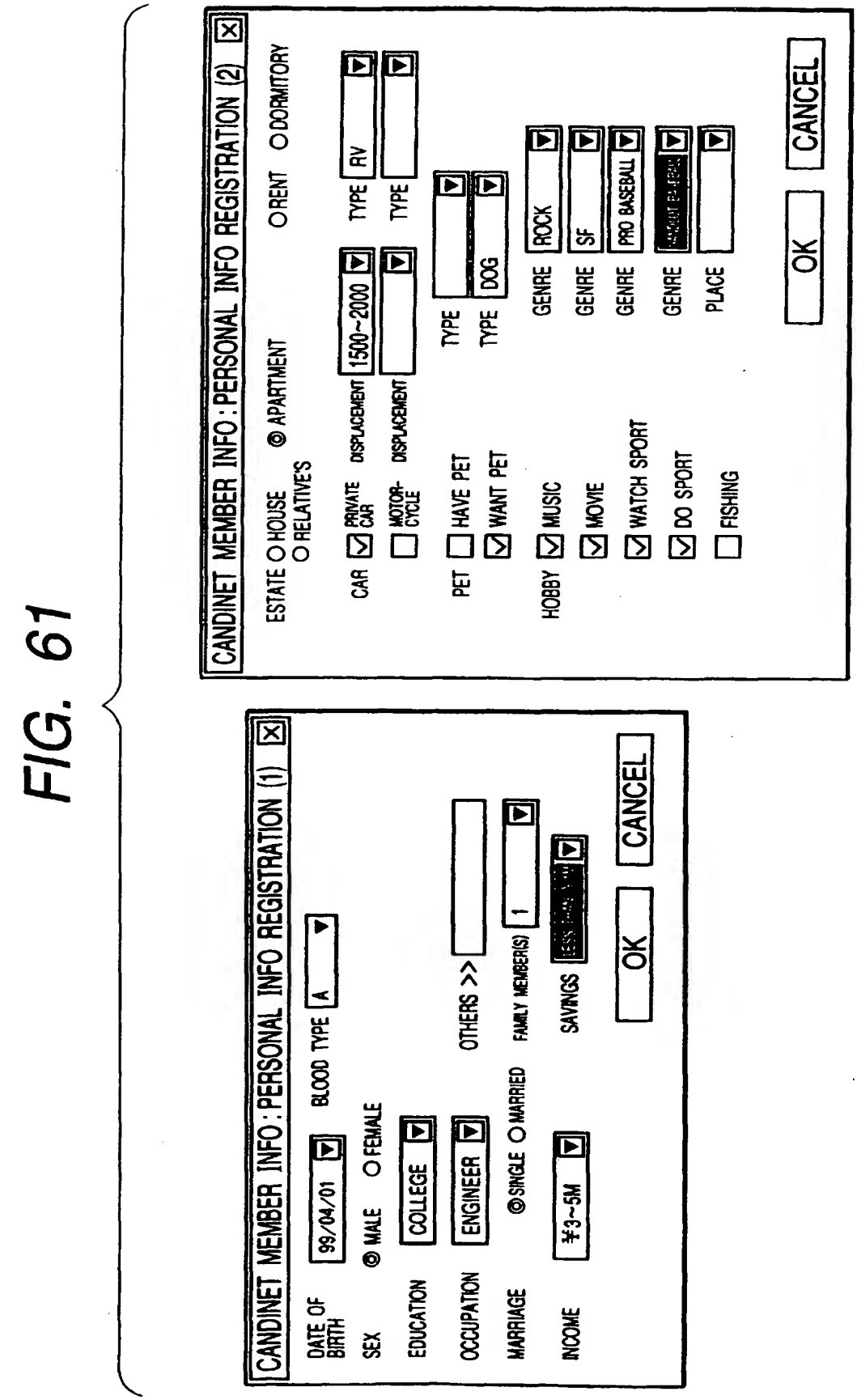

CANDINET MEMBER INFO: PERSONAL INFO REGISTRATION (1)
DATE OF BIRTH
99/04/01
BLOOD TYPE
A
SEX
MALE
FEMALE
EDUCATION
COLLEGE
OCCUPATION
ENGINEER
OTHERS >>
MARRIAGE
SINGLE
MARRIED
FAMILY MEMBER(S)
1
INCOME
¥3~5M
SAVINGS
OK
CANCEL
CANDINET MEMBER INFO: PERSONAL INFO REGISTRATION (2)
ESTATE
HOUSE
APARTMENT
RENT
DORMITORY
RELATIVES
CAR
PRIVATE CAR
DISPLACEMENT
1500~2000
TYPE
RV
MOTOR-CYCLE
DISPLACEMENT
TYPE
PET
HAVE PET
TYPE
WANT PET
TYPE
DOG
HOBBY
MUSIC
GENRE
ROCK
MOVIE
GENRE
SF
WATCH SPORT
GENRE
PRO BASEBALL
DO SPORT
GENRE
FISHING
PLACE
OK
CANCEL

FIG. 62

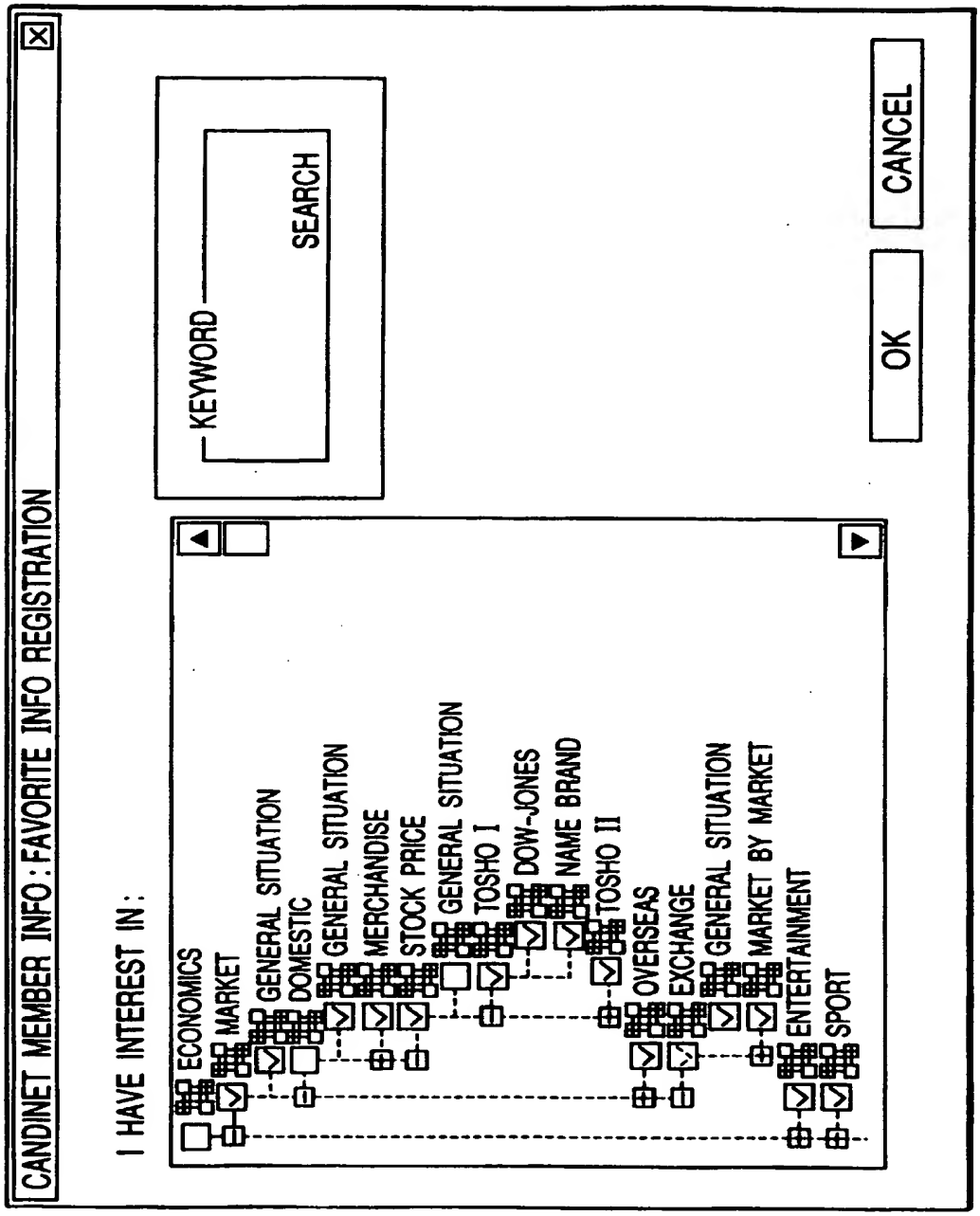

CANDINET MEMBER INFO : FAVORITE INFO REGISTRATION
I HAVE INTEREST IN :
ECONOMICS
MARKET
GENERAL SITUATION
DOMESTIC
GENERAL SITUATION
MERCHANDISE
STOCK PRICE
GENERAL SITUATION
TOSHO I
DOW-JONES
NAME BRAND
TOSHO II
OVERSEAS
EXCHANGE
GENERAL SITUATION
MARKET BY MARKET
ENTERTAINMENT
SPORT
KEYWORD
SEARCH
OK
CANCEL

FIG. 63

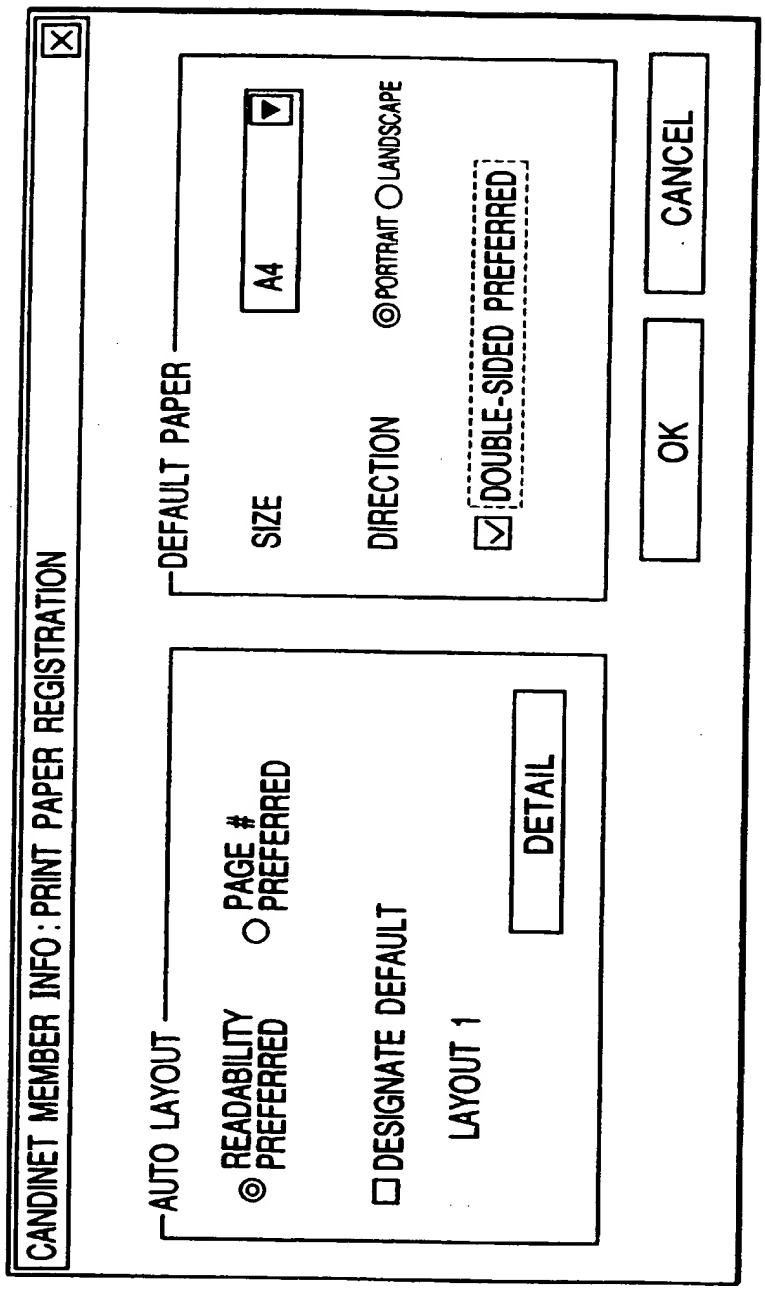

CANDINET MEMBER INFO: PRINT PAPER REGISTRATION
AUTO LAYOUT
READABILITY PREFERRED
PAGE # PREFERRED
DESIGNATE DEFAULT
LAYOUT 1
DETAIL
DEFAULT PAPER
SIZE
A4
DIRECTION
PORTRAIT
LANDSCAPE
DOUBLE-SIDED PREFERRED
OK
CANCEL

FIG. 64

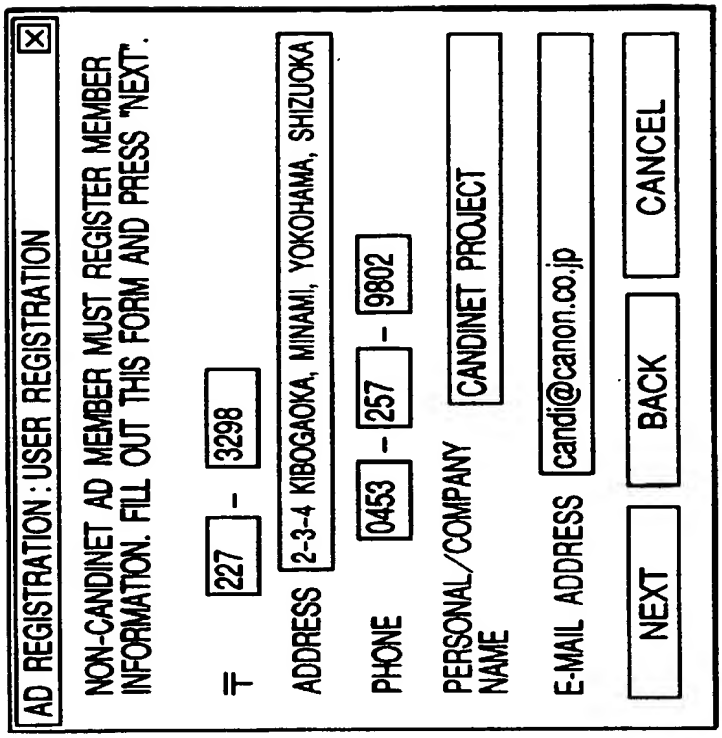

AD REGISTRATION : USER REGISTRATION
NON-CANDINET AD MEMBER MUST REGISTER MEMBER INFORMATION. FILL OUT THIS FORM AND PRESS "NEXT".
〒 227 - 3298
ADDRESS 2-3-4 KIBOGAOKA, MINAMI, YOKOHAMA, SHIZUOKA
PHONE 0453 - 257 - 9802
PERSONAL/COMPANY NAME CANDINET PROJECT
E-MAIL ADDRESS candi@canon.co.jp
NEXT
BACK
CANCEL
AD REGISTRATION : PASSWORD CONFIRMATION
ENTER PASSWORD FOR CANDINET AD MEMBER ID CA INF 0023
****
NEXT
BACK
CANCEL

FIG. 65

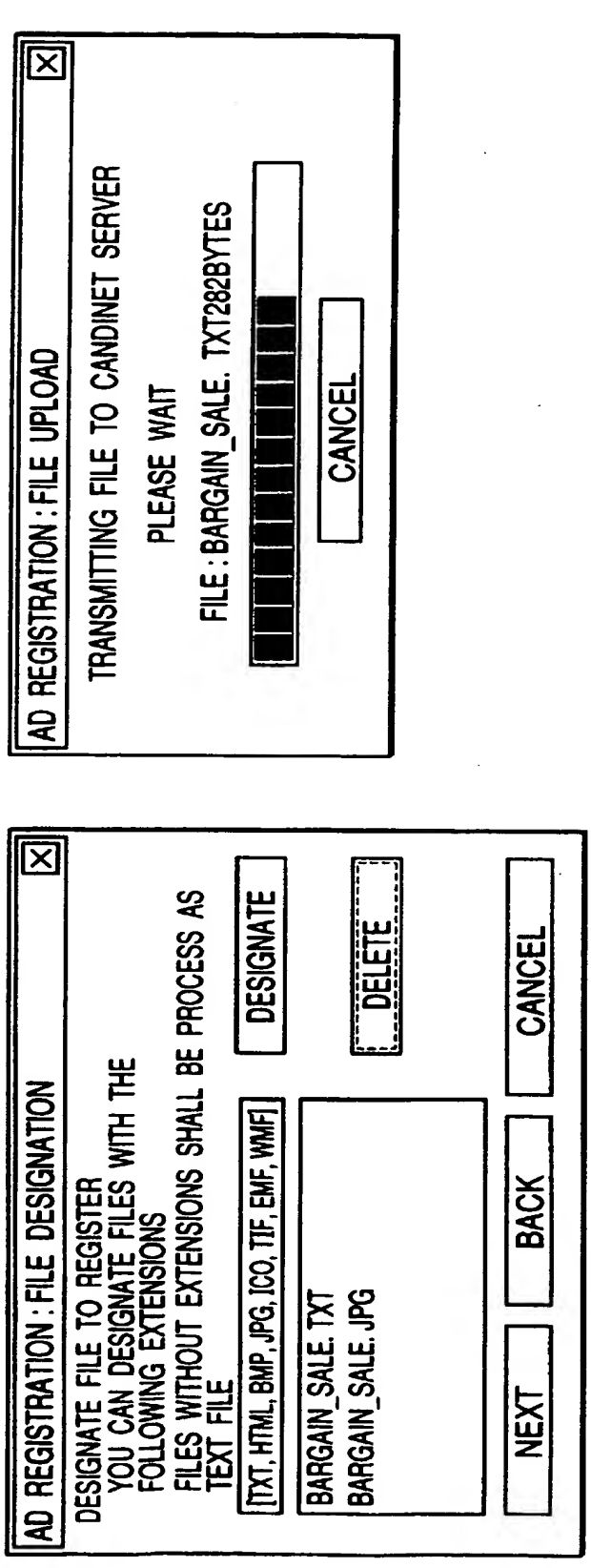

AD REGISTRATION : FILE DESIGNATION
DESIGNATE FILE TO REGISTER
YOU CAN DESIGNATE FILES WITH THE FOLLOWING EXTENSIONS
FILES WITHOUT EXTENSIONS SHALL BE PROCESS AS TEXT FILE
[TXT, HTML, BMP, JPG, ICO, TIF, EMF, WMF]
DESIGNATE
BARGAIN_SALE.TXT
BARGAIN_SALE.JPG
DELETE
NEXT
BACK
CANCEL
AD REGISTRATION : FILE UPLOAD
TRANSMITTING FILE TO CANDINET SERVER
PLEASE WAIT
FILE : BARGAIN_SALE. TXT282BYTES
CANCEL

FIG. 66

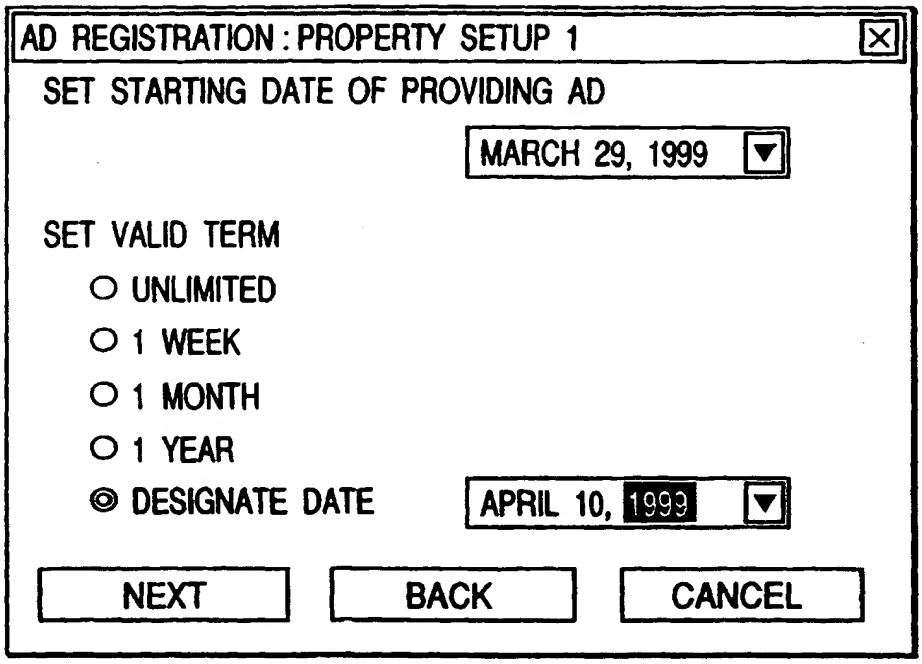

AD REGISTRATION : PROPERTY SETUP 1
SET STARTING DATE OF PROVIDING AD
MARCH 29, 1999
SET VALID TERM
UNLIMITED
1 WEEK
1 MONTH
1 YEAR
DESIGNATE DATE
APRIL 10, 1999
NEXT
BACK
CANCEL

FIG. 67

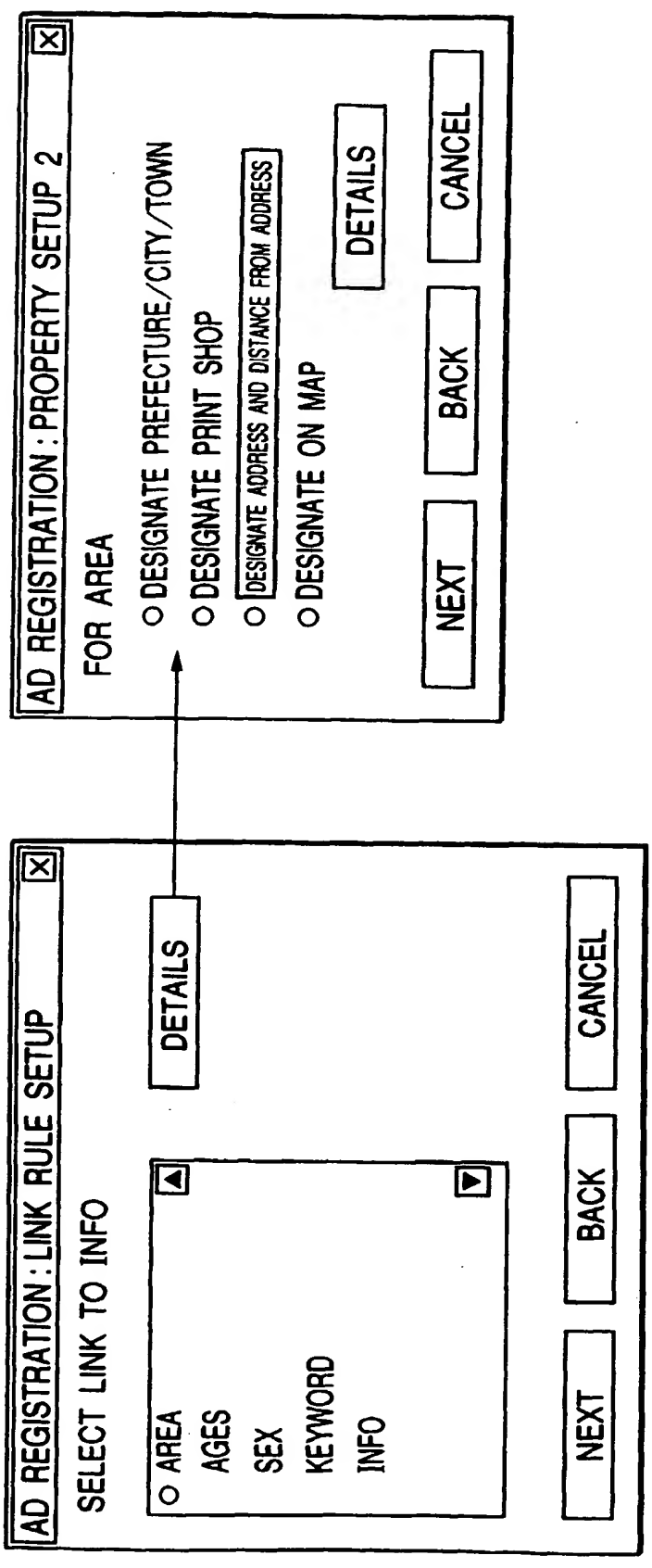

AD REGISTRATION : LINK RULE SETUP
SELECT LINK TO INFO
AREA
AGES
SEX
KEYWORD
INFO
DETAILS
NEXT
BACK
CANCEL
AD REGISTRATION : PROPERTY SETUP 2
FOR AREA
DESIGNATE PREFECTURE/CITY/TOWN
DESIGNATE PRINT SHOP
DESIGNATE ADDRESS AND DISTANCE FROM ADDRESS
DESIGNATE ON MAP
DETAILS
NEXT
BACK
CANCEL

FIG. 68

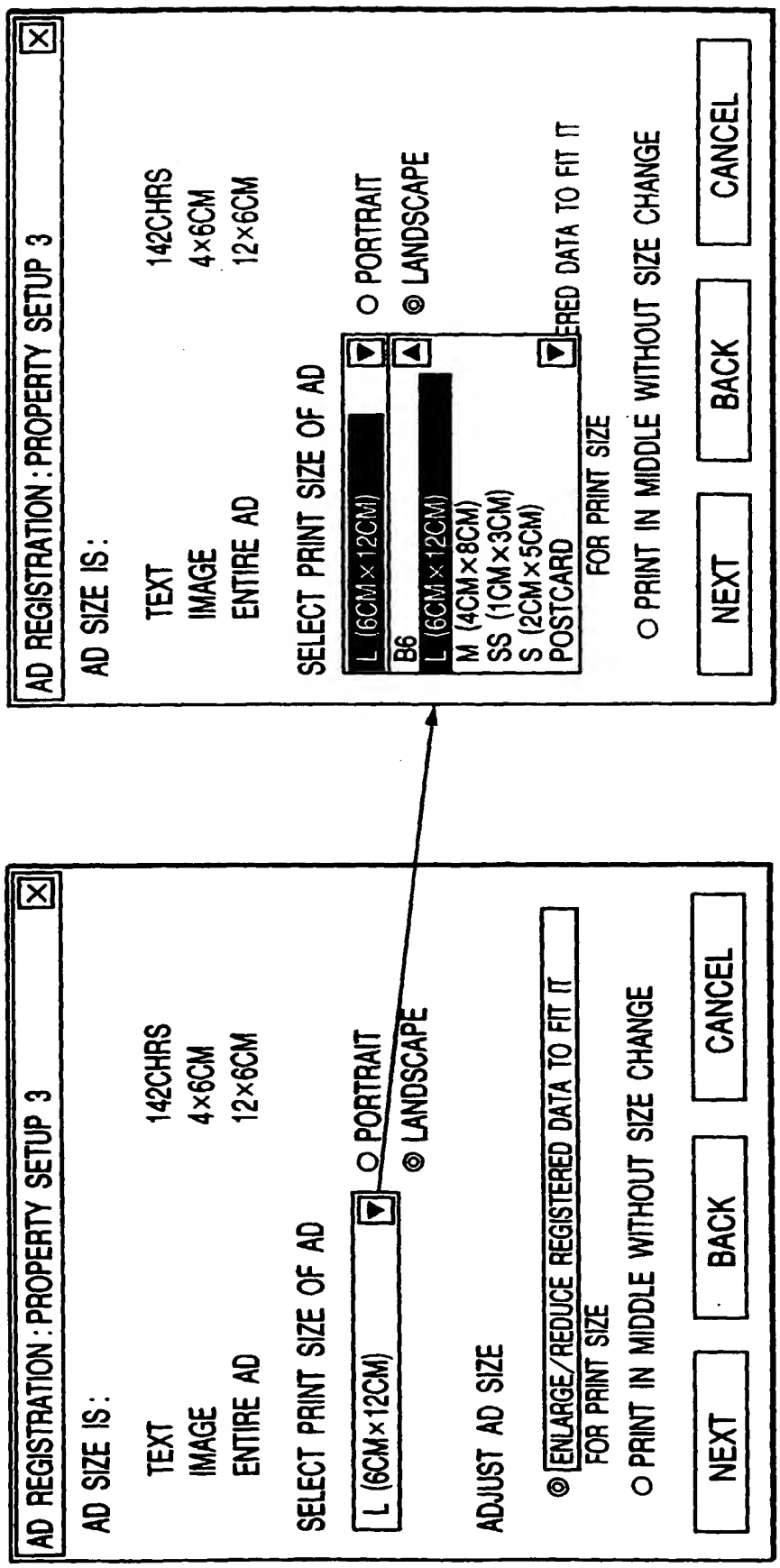

AD REGISTRATION : PROPERTY SETUP 3
AD SIZE IS :
TEXT 142CHRS
IMAGE 4×6CM
ENTIRE AD 12×6CM
SELECT PRINT SIZE OF AD
L (6CM×12CM)
O PORTRAIT
◎ LANDSCAPE
ADJUST AD SIZE
◎ ENLARGE/REDUCE REGISTERED DATA TO FIT IT FOR PRINT SIZE
O PRINT IN MIDDLE WITHOUT SIZE CHANGE
NEXT
BACK
CANCEL
AD REGISTRATION : PROPERTY SETUP 3
AD SIZE IS :
TEXT 142CHRS
IMAGE 4×6CM
ENTIRE AD 12×6CM
SELECT PRINT SIZE OF AD
L (6CM×12CM)
B6
L (6CM×12CM)
M (4CM×8CM)
SS (1CM×3CM)
S (2CM×5CM)
POSTCARD
O PORTRAIT
◎ LANDSCAPE
ERED DATA TO FIT IT FOR PRINT SIZE
O PRINT IN MIDDLE WITHOUT SIZE CHANGE
NEXT
BACK
CANCEL

FIG. 69

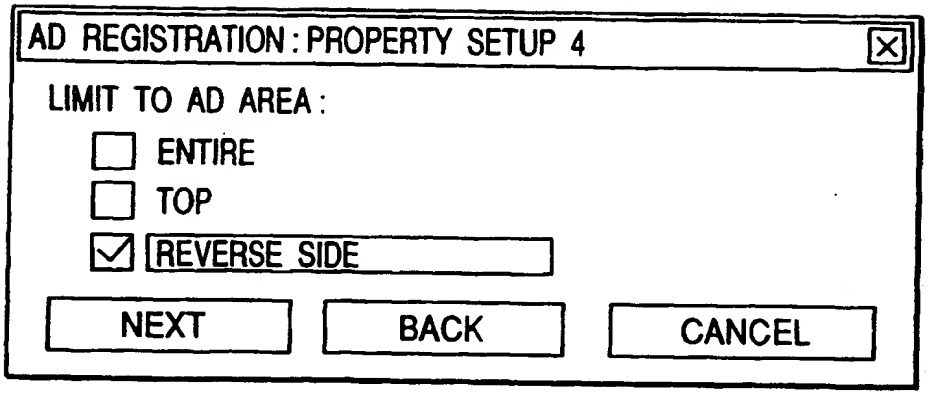

AD REGISTRATION : PROPERTY SETUP 4
LIMIT TO AD AREA :
ENTIRE
TOP
REVERSE SIDE
NEXT
BACK
CANCEL

FIG. 70

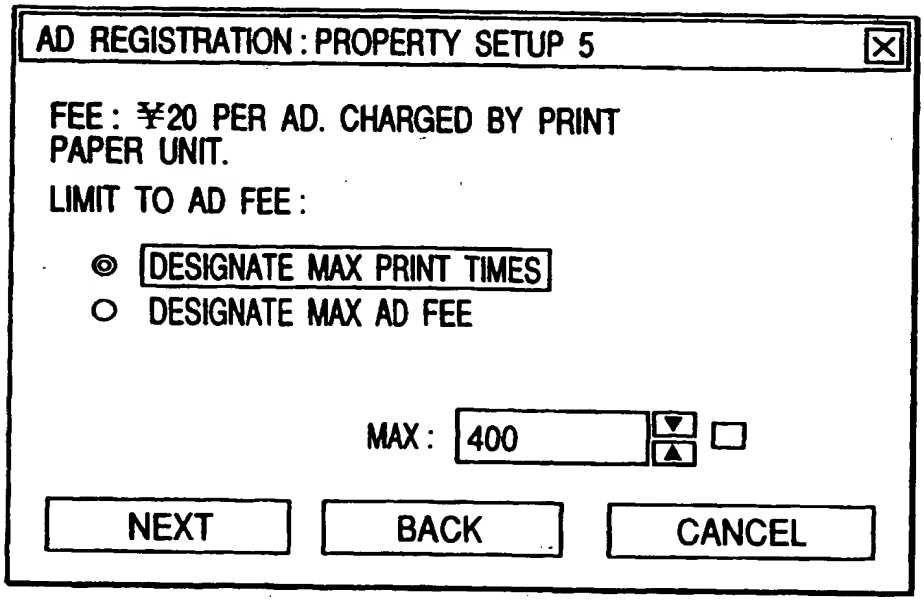

AD REGISTRATION : PROPERTY SETUP 5
FEE : ¥20 PER AD. CHARGED BY PRINT PAPER UNIT.
LIMIT TO AD FEE :
DESIGNATE MAX PRINT TIMES
DESIGNATE MAX AD FEE
MAX : 400
NEXT
BACK
CANCEL

FIG. 71

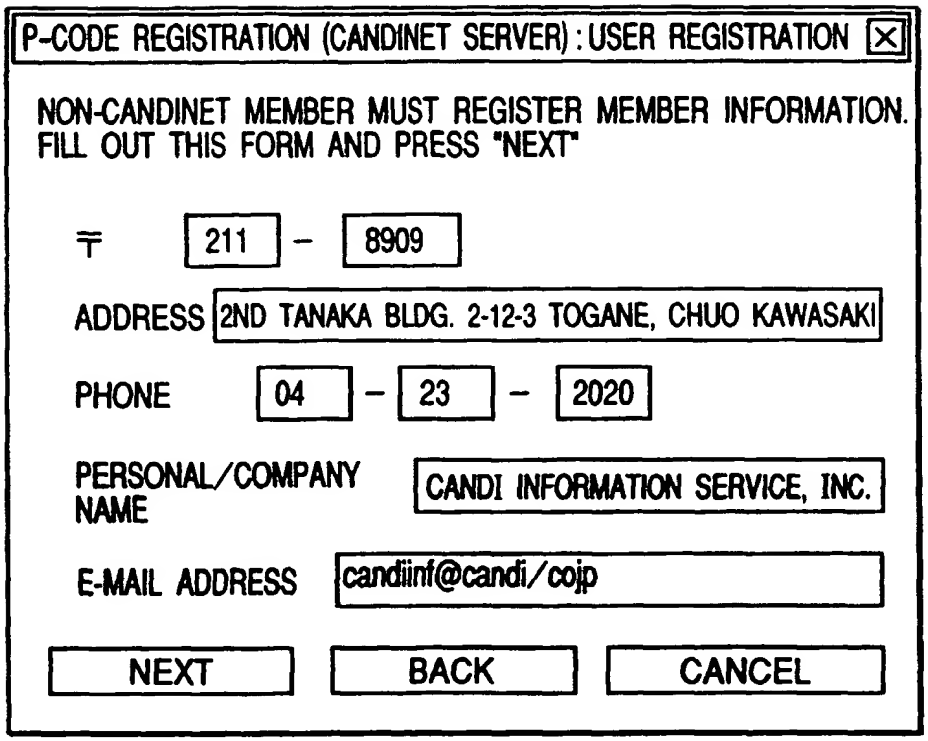

P-CODE REGISTRATION (CANDINET SERVER) : USER REGISTRATION
NON-CANDINET MEMBER MUST REGISTER MEMBER INFORMATION.
FILL OUT THIS FORM AND PRESS "NEXT"
〒
211
-
8909
ADDRESS
2ND TANAKA BLDG. 2-12-3 TOGANE, CHUO KAWASAKI
PHONE
04
-
23
-
2020
PERSONAL/COMPANY NAME
CANDI INFORMATION SERVICE, INC.
E-MAIL ADDRESS
candiinf@candi/coip
NEXT
BACK
CANCEL

FIG. 72

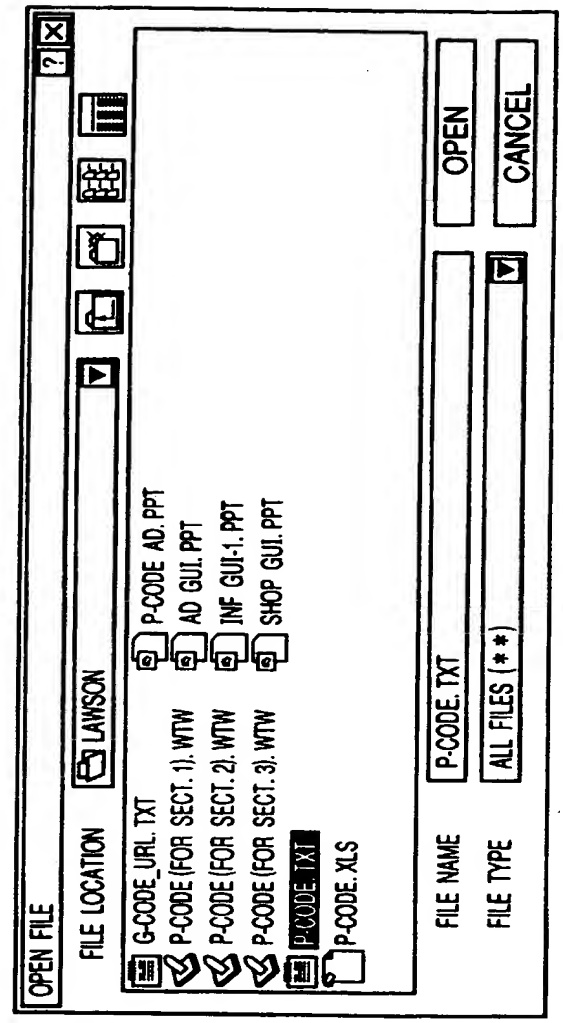

OPEN FILE
FILE LOCATION
LAWSON
G-CODE_URL.TXT
P-CODE(FOR SECT.1).WTW
P-CODE(FOR SECT.2).WTW
P-CODE(FOR SECT.3).WTW
P-CODE.TXT
P-CODE.XLS
P-CODE AD.PPT
AD GUI.PPT
INF GUI-1.PPT
SHOP GUI.PPT
FILE NAME
P-CODE.TXT
FILE TYPE
ALL FILES (**)
OPEN
CANCEL
P-CODE REGISTRATION (CANONET SERVER) : FILE DESIGNATION
DESIGNATE FILE TO REGISTER
YOU CAN DESIGNATE FILES WITH THE FOLLOWING EXTENSIONS
FILES WITH NO EXTENSIONS SHALL BE PROCESSED AS
TEXT FILE
[TXT, HTML, BMP, JPG, ICO, TIF, EMF, WMF]
DESIGNATE
TOP001.TXT
TOP_ATTACH.JPG
DELETE
NEXT
BACK
CANCEL

FIG. 73

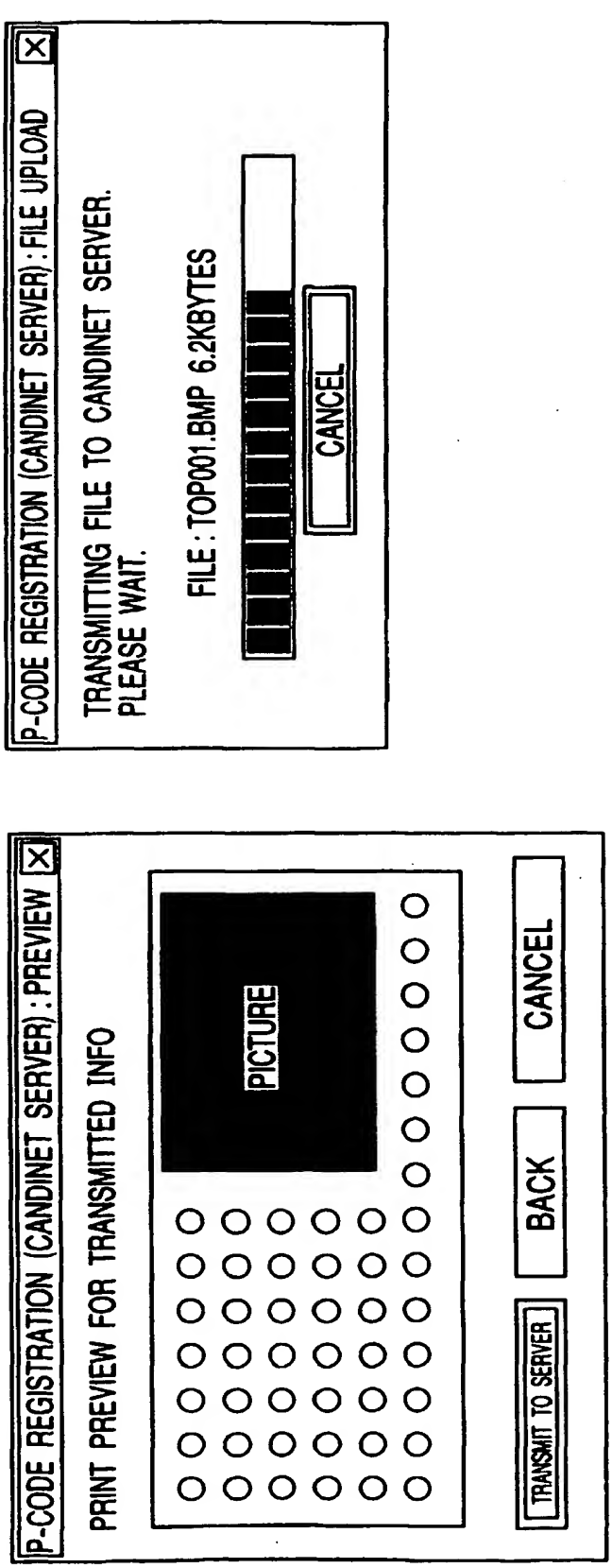

P-CODE REGISTRATION (CANDINET SERVER) : PREVIEW
PRINT PREVIEW FOR TRANSMITTED INFO
PICTURE
TRANSMIT TO SERVER
BACK
CANCEL
P-CODE REGISTRATION (CANDINET SERVER) : FILE UPLOAD
TRANSMITTING FILE TO CANDINET SERVER.
PLEASE WAIT.
FILE : TOP001.BMP 6.2KBYTES
CANCEL

FIG. 74

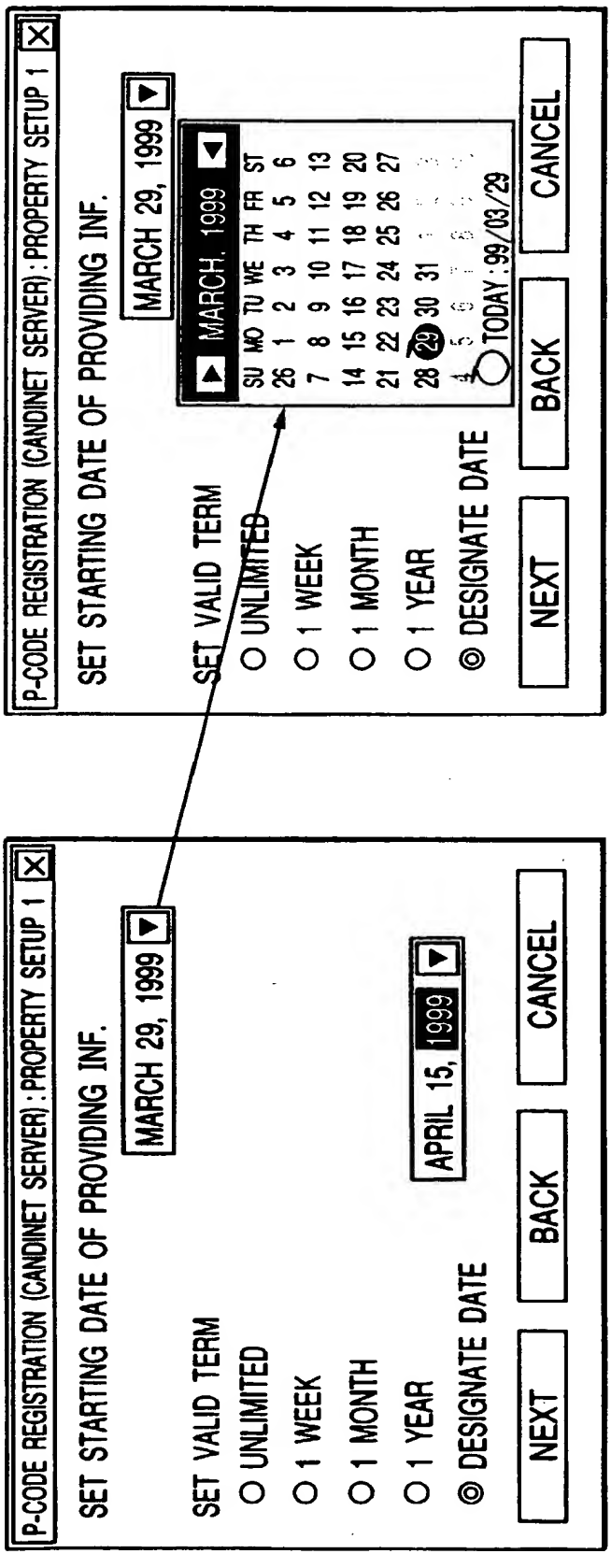

P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 1
SET STARTING DATE OF PROVIDING INF.
MARCH 29, 1999
SET VALID TERM
O UNLIMITED
O 1 WEEK
O 1 MONTH
O 1 YEAR
◎ DESIGNATE DATE
APRIL 15, 1999
NEXT
BACK
CANCEL
P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 1
SET STARTING DATE OF PROVIDING INF.
MARCH 29, 1999
SET VALID TERM
O UNLIMITED
O 1 WEEK
O 1 MONTH
O 1 YEAR
◎ DESIGNATE DATE
MARCH, 1999
SU MO TU WE TH FR ST
26 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31
TODAY : 99/03/29
NEXT
BACK
CANCEL

FIG. 75

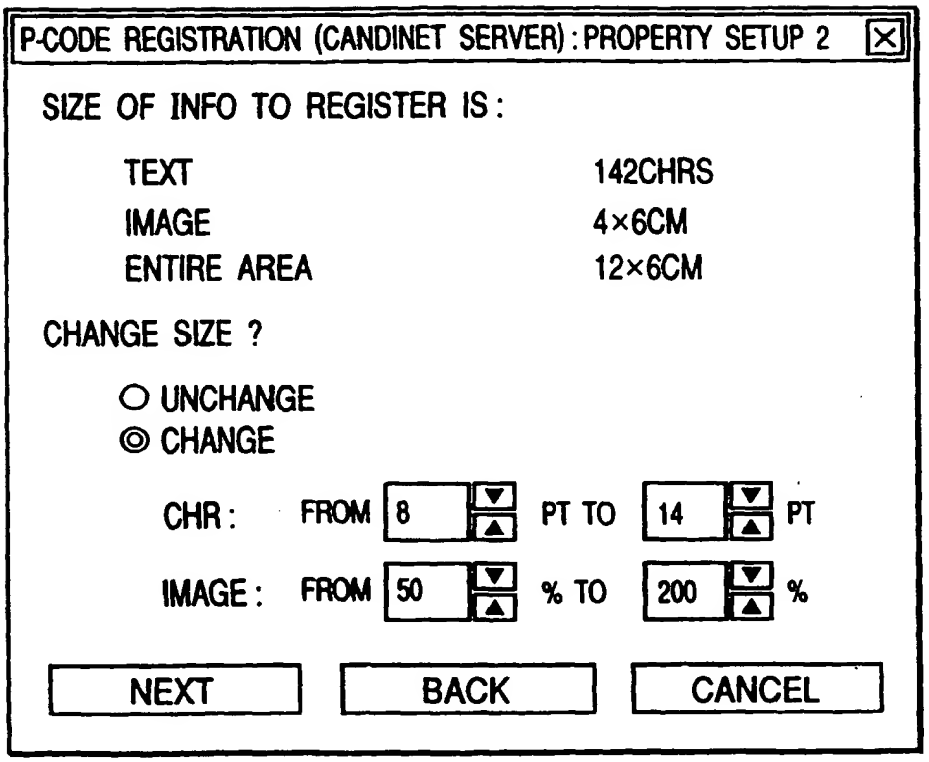
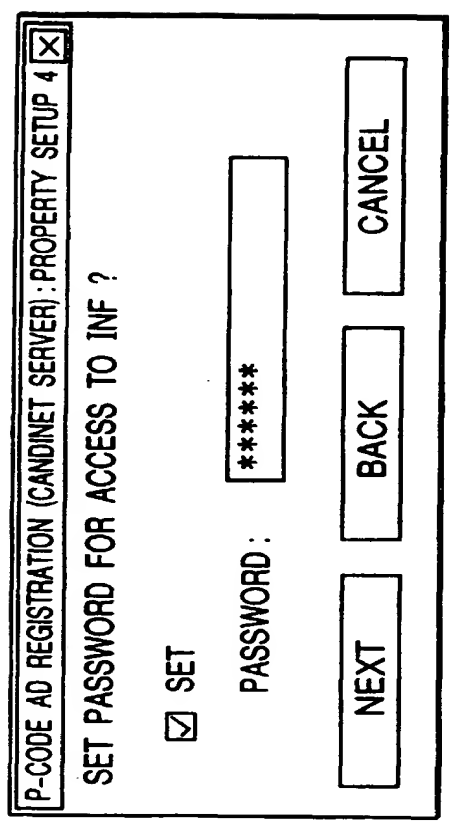

P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 2
SIZE OF INFO TO REGISTER IS :
TEXT
142CHRS
IMAGE
4×6CM
ENTIRE AREA
12×6CM
CHANGE SIZE ?
UNCHANGE
CHANGE
CHR : FROM 8 PT TO 14 PT
IMAGE : FROM 50 % TO 200 %
NEXT
BACK
CANCEL

FIG. 76


P-CODE AD REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 4
SET PASSWORD FOR ACCESS TO INF ?
SET
PASSWORD :
******
NEXT
BACK
CANCEL

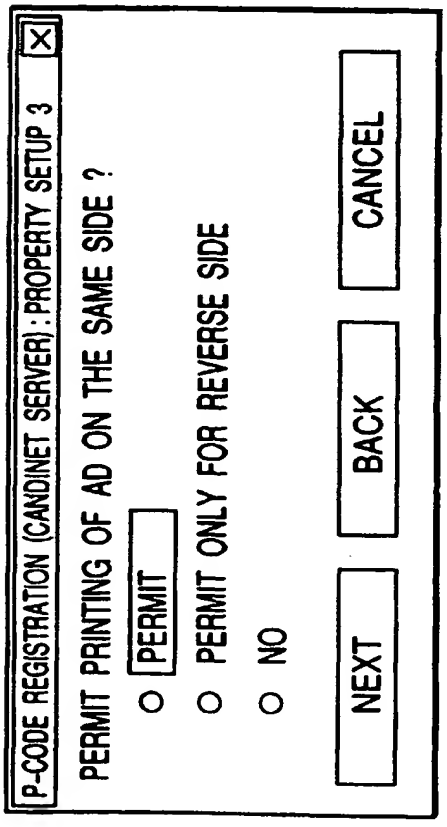

P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 3
PERMIT PRINTING OF AD ON THE SAME SIDE ?
PERMIT
PERMIT ONLY FOR REVERSE SIDE
NO
NEXT
BACK
CANCEL

FIG. 77

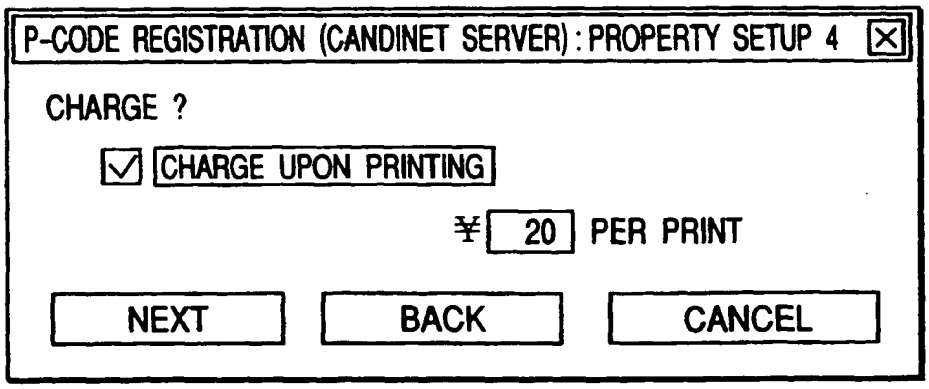

P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 4
CHARGE ?
CHARGE UPON PRINTING
¥ 20 PER PRINT
NEXT
BACK
CANCEL

FIG. 78

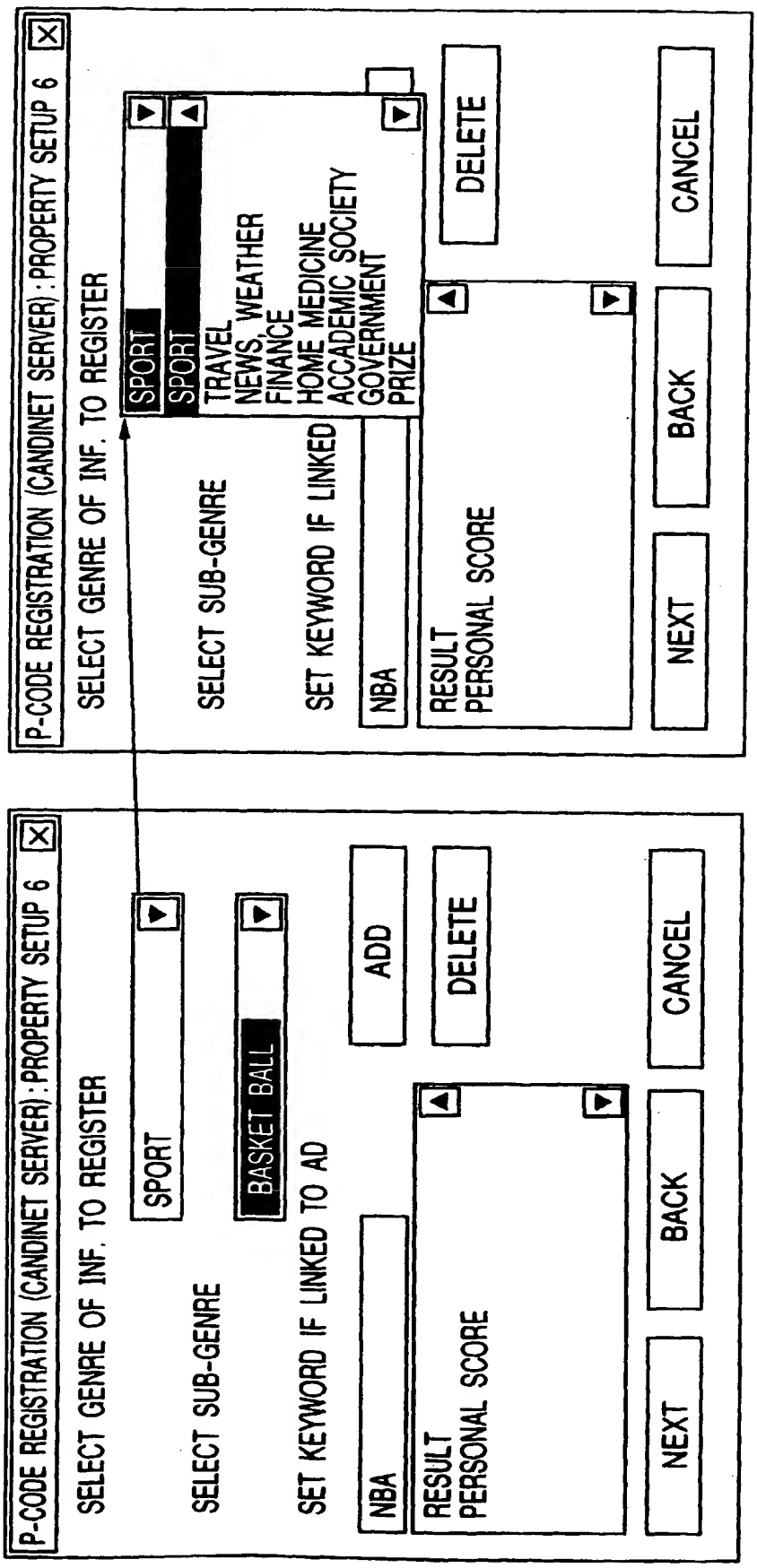

P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 6
SELECT GENRE OF INF. TO REGISTER
SPORT
SELECT SUB-GENRE
BASKET BALL
SET KEYWORD IF LINKED TO AD
NBA
ADD
DELETE
RESULT
PERSONAL SCORE
NEXT
BACK
CANCEL
P-CODE REGISTRATION (CANDINET SERVER) : PROPERTY SETUP 6
SELECT GENRE OF INF. TO REGISTER
SPORT
SPORT
TRAVEL
NEWS, WEATHER
FINANCE
HOME MEDICINE
ACCADEMIC SOCIETY
GOVERNMENT
PRIZE
SELECT SUB-GENRE
SET KEYWORD IF LINKED
NBA
DELETE
RESULT
PERSONAL SCORE
NEXT
BACK
CANCEL

FIG. 79

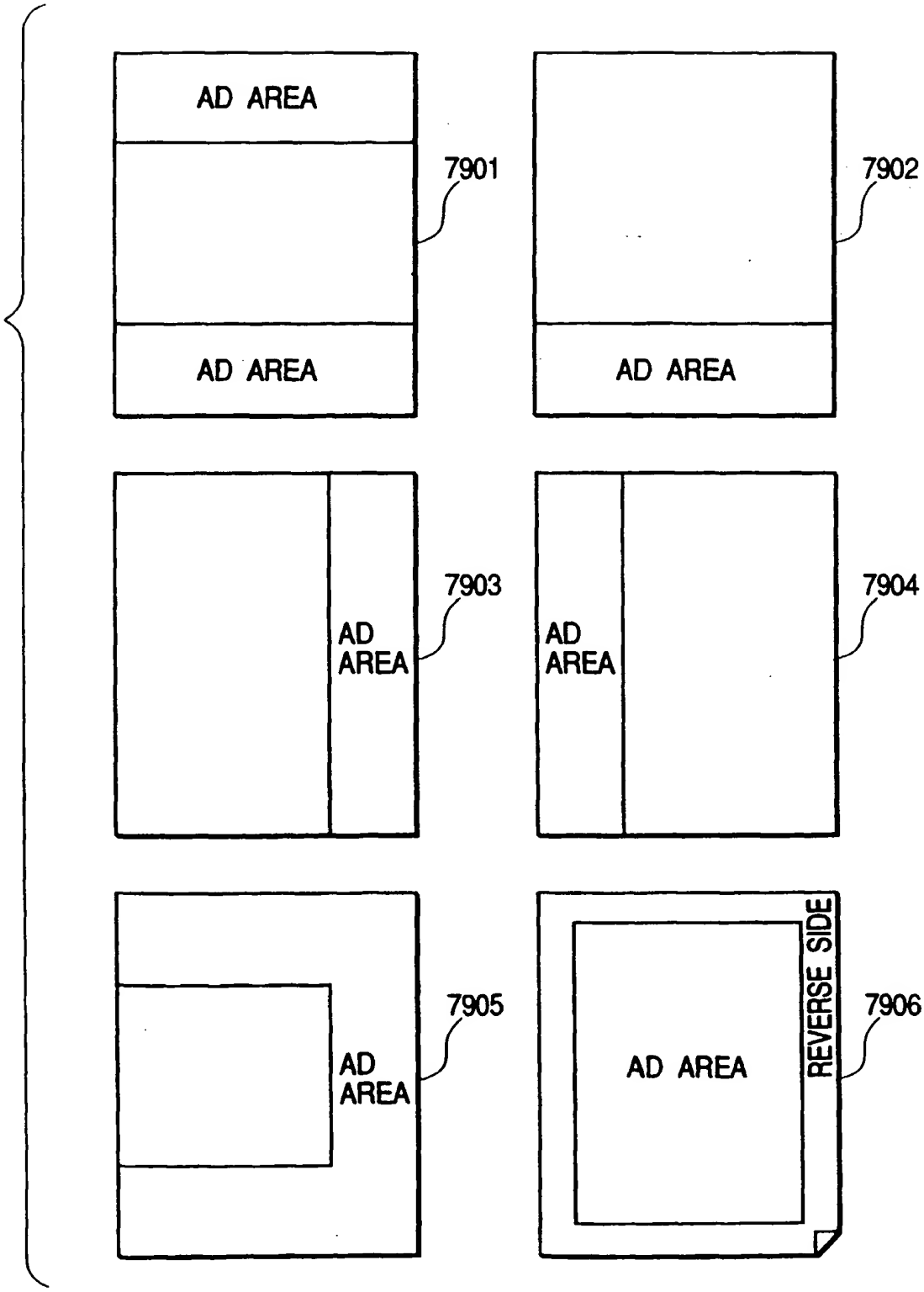

AD AREA
7901
AD AREA
7902
AD AREA
7903
AD
AREA
7904
AD
AREA
7905
AD
AREA
AD AREA
REVERSE SIDE
7906

FIG. 80

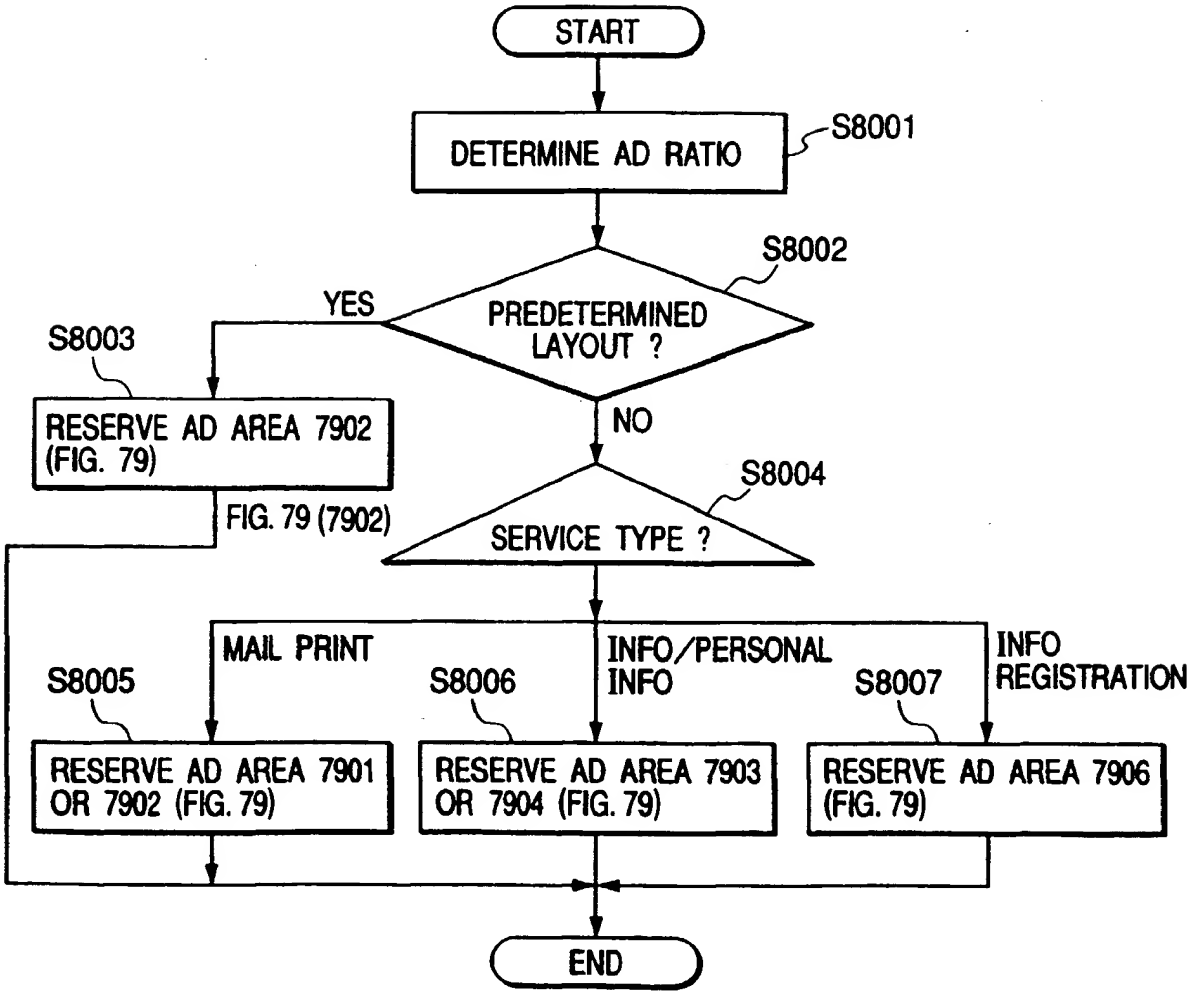

START
DETERMINE AD RATIO
S8001
S8002
PREDETERMINED LAYOUT ?
YES
NO
S8003
RESERVE AD AREA 7902 (FIG. 79)
FIG. 79 (7902)
S8004
SERVICE TYPE ?
MAIL PRINT
INFO/PERSONAL INFO
INFO REGISTRATION
S8005
S8006
S8007
RESERVE AD AREA 7901 OR 7902 (FIG. 79)
RESERVE AD AREA 7903 OR 7904 (FIG. 79)
RESERVE AD AREA 7906 (FIG. 79)
END

FIG. 81

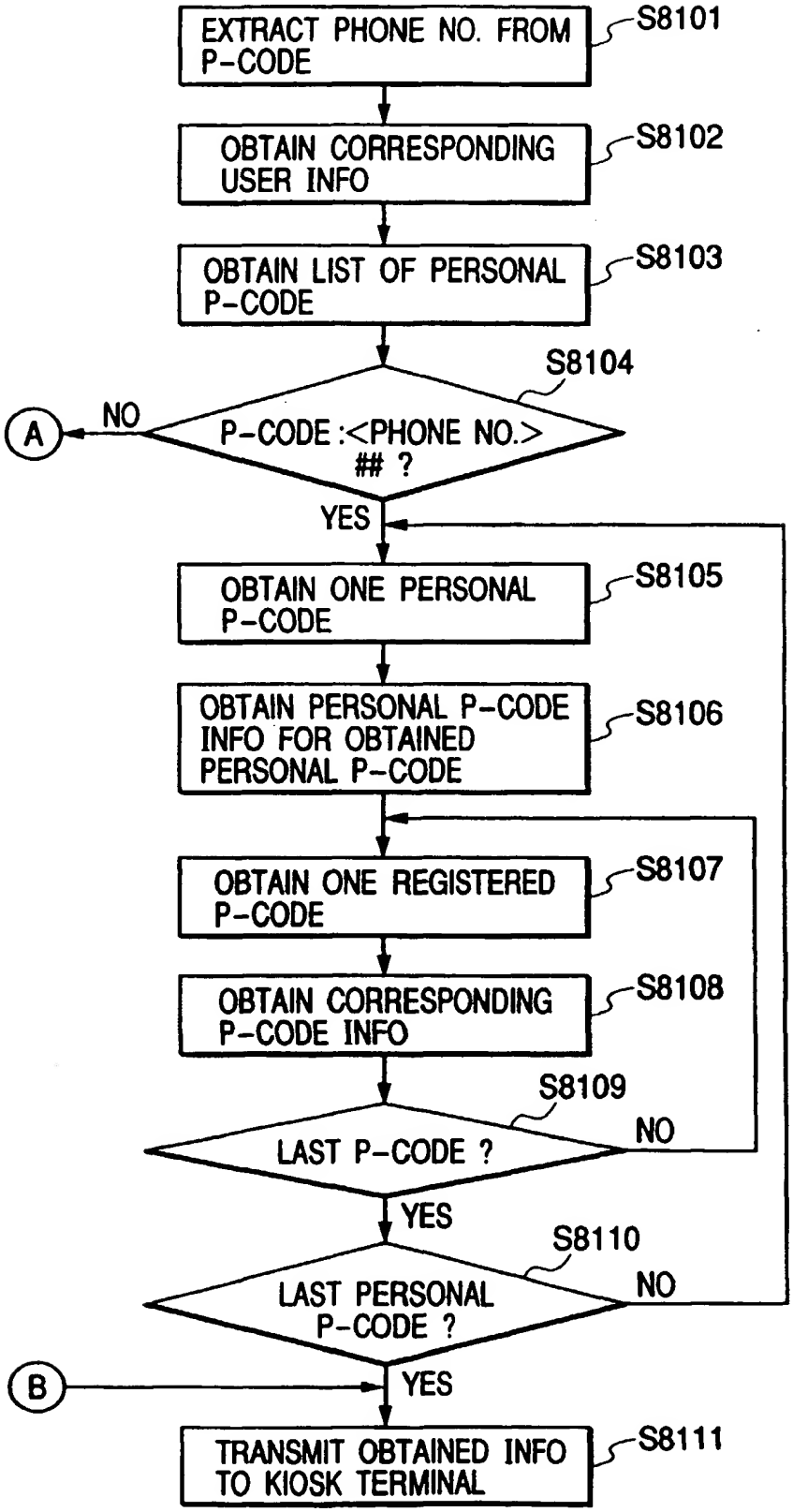

EXTRACT PHONE NO. FROM P-CODE
S8101
OBTAIN CORRESPONDING USER INFO
S8102
OBTAIN LIST OF PERSONAL P-CODE
S8103
S8104
P-CODE :<PHONE NO.> ## ?
NO
A
YES
OBTAIN ONE PERSONAL P-CODE
S8105
OBTAIN PERSONAL P-CODE INFO FOR OBTAINED PERSONAL P-CODE
S8106
OBTAIN ONE REGISTERED P-CODE
S8107
OBTAIN CORRESPONDING P-CODE INFO
S8108
S8109
LAST P-CODE ?
NO
YES
S8110
LAST PERSONAL P-CODE ?
NO
B
YES
TRANSMIT OBTAINED INFO TO KIOSK TERMINAL
S8111

FIG. 82

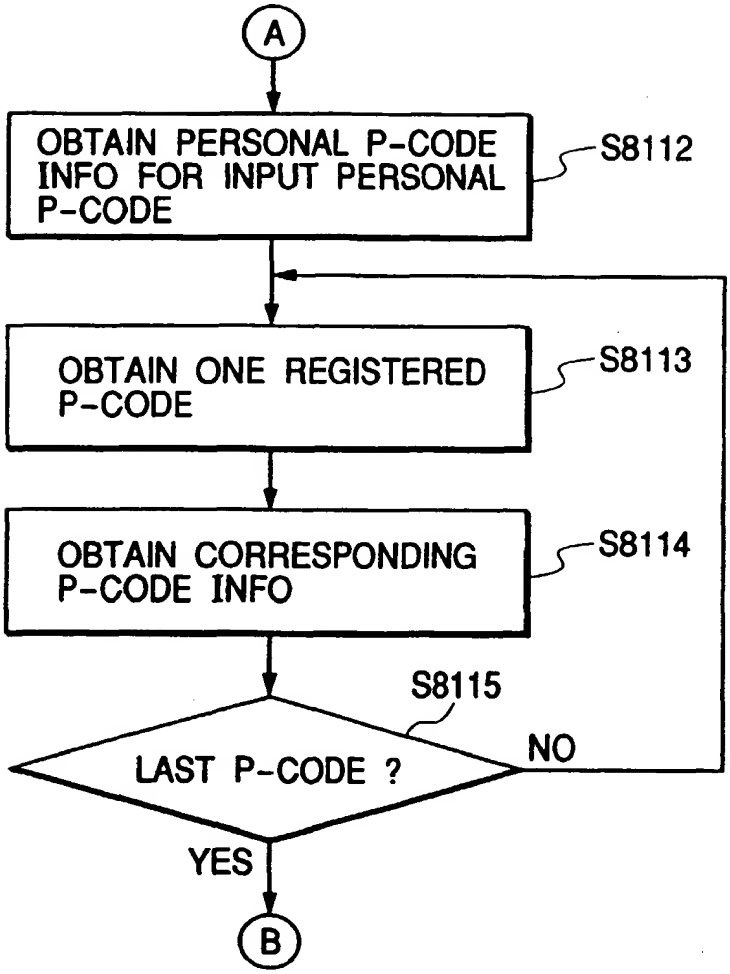

A
OBTAIN PERSONAL P-CODE INFO FOR INPUT PERSONAL P-CODE
S8112
OBTAIN ONE REGISTERED P-CODE
S8113
OBTAIN CORRESPONDING P-CODE INFO
S8114
S8115
LAST P-CODE ?
NO
YES
B

FIG. 83

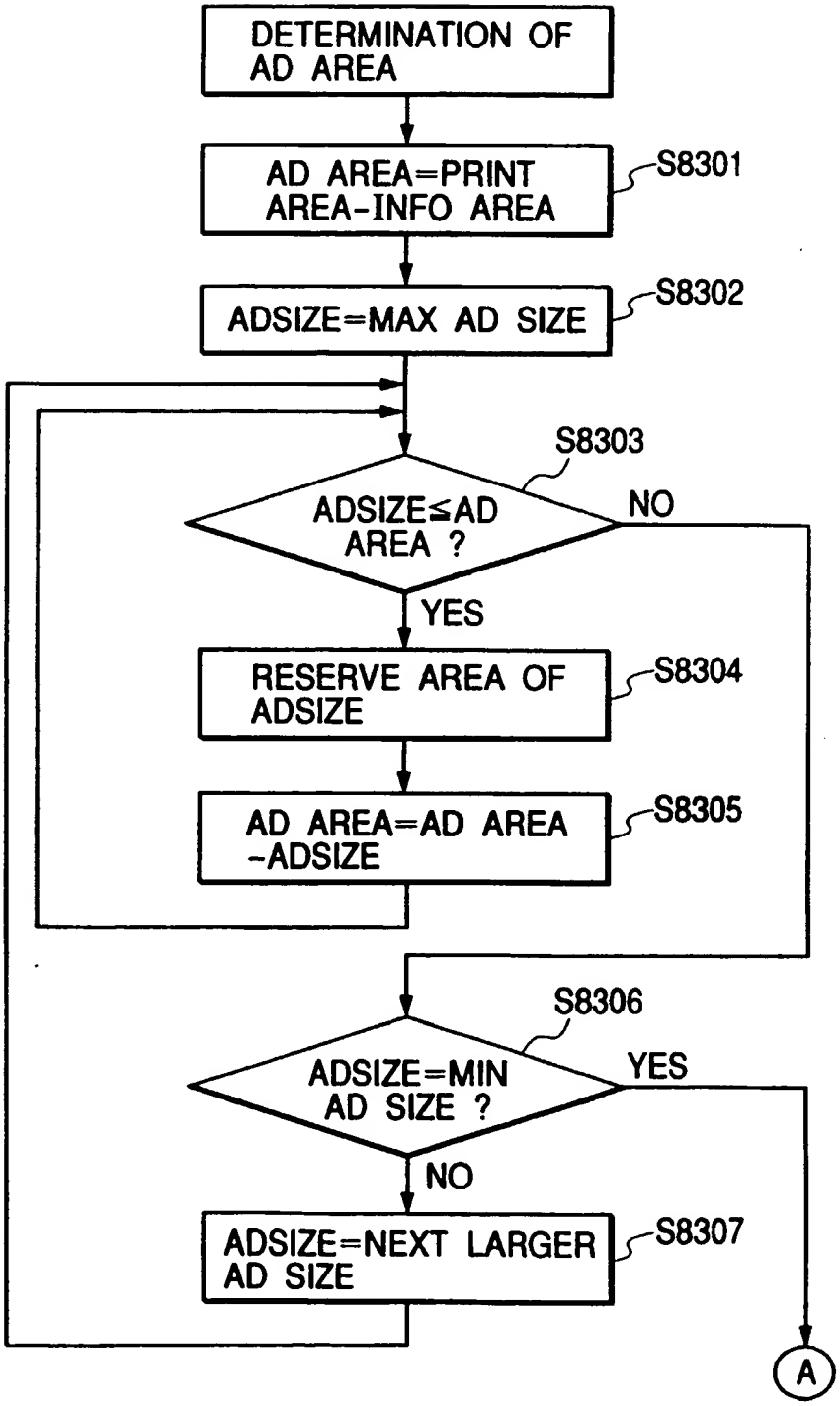

DETERMINATION OF AD AREA
AD AREA=PRINT AREA-INFO AREA
S8301
ADSIZE=MAX AD SIZE
S8302
S8303
ADSIZE≤AD AREA ?
NO
YES
RESERVE AREA OF ADSIZE
S8304
AD AREA=AD AREA -ADSIZE
S8305
S8306
ADSIZE=MIN AD SIZE ?
YES
NO
ADSIZE=NEXT LARGER AD SIZE
S8307
A

FIG. 84

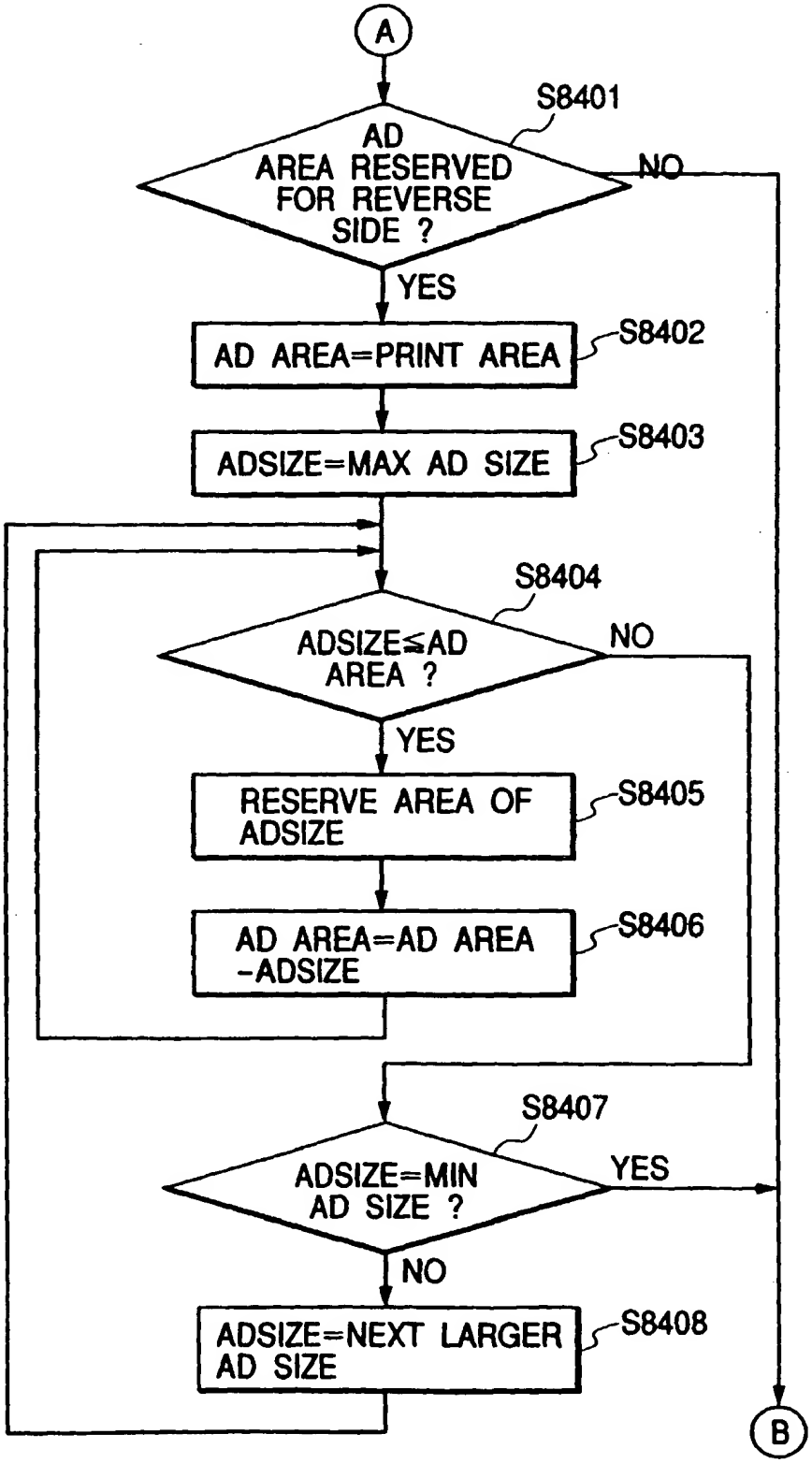
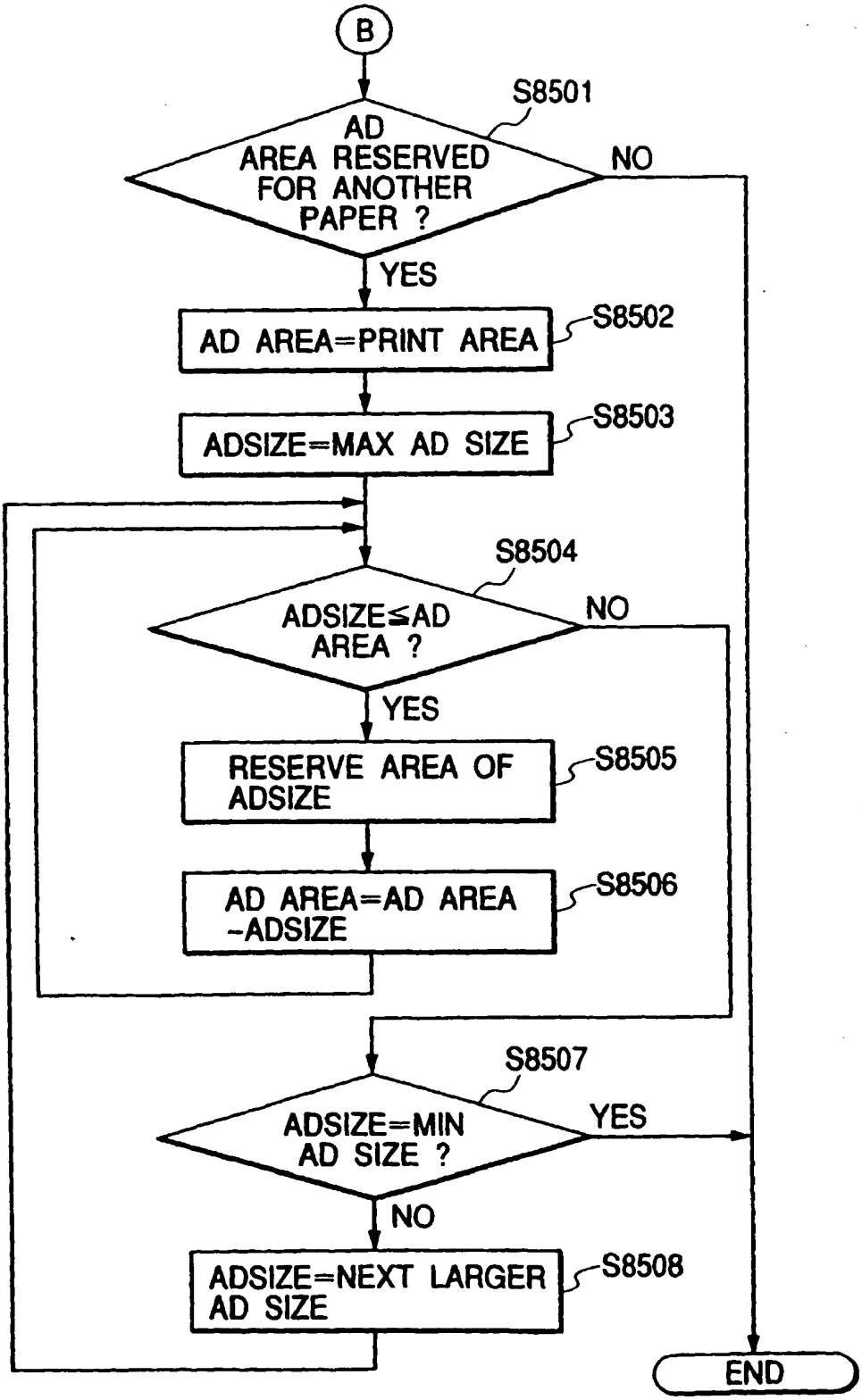

A
S8401
AD AREA RESERVED FOR REVERSE SIDE ?
NO
YES
AD AREA=PRINT AREA
S8402
ADSIZE=MAX AD SIZE
S8403
S8404
ADSIZE≤AD AREA ?
NO
YES
RESERVE AREA OF ADSIZE
S8405
AD AREA=AD AREA -ADSIZE
S8406
S8407
ADSIZE=MIN AD SIZE ?
YES
NO
ADSIZE=NEXT LARGER AD SIZE
S8408
B

FIG. 85


B
S8501
AD AREA RESERVED FOR ANOTHER PAPER ?
NO
YES
AD AREA=PRINT AREA
S8502
ADSIZE=MAX AD SIZE
S8503
S8504
ADSIZE≤AD AREA ?
NO
YES
RESERVE AREA OF ADSIZE
S8505
AD AREA=AD AREA -ADSIZE
S8506
S8507
ADSIZE=MIN AD SIZE ?
YES
NO
ADSIZE=NEXT LARGER AD SIZE
S8508
END

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